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THE UNIVERSITY OF ALBERTA

CHANGE OF LEADER BEHAVIOR
ATTRIBUTABLE TO
THE LEADERSHIP COURSE FOR SCHOOL PRINCIPALS

by

JOSEPH HEYDON BLOCKSIDGE

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A THESIS

SUBMITTED TO THE FACULTY OF GRADUATE STUDIES
IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE DEGREE
OF MASTER OF EDUCATION

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DEPARTMENT OF EDUCATIONAL ADMINISTRATION

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The undersigned certify that they have read, and
recommend to the Faculty of Graduate Studies for acceptance,
a thesis entitled

CHANGE OF LEADER BEHAVIOR

ATTRIBUTABLE TO

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submitted by

JOSEPH HEYDON BLOCKSIDGE

in partial fulfilment of the requirements for the degree of
Master of Education.

ABSTRACT

This thesis studied the effect of the Leadership Course for School Principals, 1958, upon the leadership qualities of the principals who participated, July 7-18, 1958, at Concordia College, Edmonton. This course was third in a series sponsored jointly by the Alberta School Trustees' Association, the Alberta Teachers' Association, the Alberta School Inspectors' Association, the Alberta Department of Education, and the Faculty of Education of the University of Alberta.

This study was of principals of schools of four rooms or more, who had held that office for at least a full year before the course. Leadership was defined to be the acts or relationships of a principal in interaction with the teachers whom he was appointed to lead. Measurement, however, was of leader behavior, which was recognized as those items of leadership in interaction which had been found through factor analysis done in conjunction with other research to be sufficiently stable to be common to a wide range of organizational structures. Leader behavior, in turn, was classified into two dimensions, or clusters: consideration, and initiating structure. Consideration was defined as behavior in interaction which indicated mutual trust, warmth, and a friendly relationship. Initiating structure was defined as behavior in interaction which set up and patterned channels of communication, and job orientation. The instrument used was the Leader Behavior Description Questionnaire.

Principals who attended the course, called course candidates, were paired with principals who had not attended such a course, called like numbers, who were the control group of this study. The superintendent-

ent, the teaching staff, and the principal himself described each of the principals in these two groups, as he was seen to behave as a leader just before the course, and again at the end of the school year after the course, in each case using the L.B.D.Q. These data were then organized, and subjected both to statistical analysis to ascertain significant differences, and to inspection to determine trends of change in leader behavior.

It was concluded that superintendents recognized a significant increase in consideration in the principals who attended the Leadership Course, which teachers tended to confirm, but that principals saw themselves as significantly lower in consideration after the course. No significant or inferred change in initiating structure was noted to have occurred in the principals who attended the course.

More detailed examination of the evidence indicated that the course had the effect upon its participants of increasing the degree of their human-relations behavior as leaders. This effect showed itself in two ways: extrinsically it caused the principals to demonstrate a greater proficiency in human-relations behavior as leaders; intrinsically it caused a personal realization on the part of the principals of their limitations as compared to their insight into desirable practices. Detailed examination of the evidence also indicated that the course had no measurable effect upon the goal-oriented behavior of the principals. It was recognized that the brevity of the course and/or the nature of the course itself probably contributed to the improvement of human-relations behavior, and to the lack of improvement of goal-oriented behavior, in the leadership of the participants in the course.

ACKNOWLEDGEMENTS

This study would have been impossible without the approval of the Director of the Leadership Course for School Principals, 1958, Dr. J. H. M. Andrews, and the Policy Committee of this course. The original idea of doing this study was suggested by Dr. Andrews, who also served as thesis advisor, and to whom is expressed appreciation for most valuable advice and support. The Policy Committee provided the funds to pay for postage, stationery, and the instrument used to gather data, as well as an appointment as consultant to one of the discussion groups of the course.

To those who participated in the study is expressed keen appreciation: to the superintendents, whose unanimous support promoted almost unanimous co-operation in their schools; to the principals who co-operated, and encouraged their teachers to participate; and to the very high percentage of teachers who replied to questionnaires so accurately that not one questionnaire was discarded.

Appreciation is also expressed to the holders of the copyright on the Leader Behavior Description Questionnaire, The Ohio State University, Columbus, Ohio, for permission granted to use this instrument for the purposes of this study.

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CHAPTER I

INTRODUCTION

I. THE LEADERSHIP COURSE FOR SCHOOL PRINCIPALS

In the summer of 1956 the first of an annual series of short courses was instituted: The Leadership Course for School Principals. At the time that this study was contemplated, two such courses had been completed, and the third was in the process of development.

The Leadership Course for School Principals, 1958, held July 7-18 of that year, was described in the program (5, p. 1) as follows:

An Activity Of
The Summer Session, University of Alberta,
In Co-operation With
The Alberta School Trustees' Association
The Alberta Teachers' Association
The Alberta School Inspectors' Association
The Alberta Department of Education
The Faculty of Education, University of Alberta

This effort to improve the quality of leadership at the school level had four expressed purposes which may be summarized as follows (5, p. 2):

1. To explore specific problems in educational administration and supervision of significance to the participants;
2. To foster development of individual plans of action by each participant;
3. To help each member to gain a deeper insight into leadership philosophies and techniques;
4. To stimulate intercommunication of educational ideas and practices.

The course itself was divided into four major areas of activity (5, pp. 8-12):

1. Lectures and discussions.
About twenty hours were devoted to this phase, in which

members heard and discussed twelve papers given by guest speakers of eminence in their areas of specialty. These papers were mimeographed, and distributed for study.

2. Group discussions.

Discussion groups were made up of a consultant, and from ten to thirteen principals whose expressed interests were similar. About twenty-five hours were spent by each group in the discussion of a particular sub-topic of supervision, such as In-service Education of Teachers, and Program Planning and Articulation.

3. Reporting.

About eight hours of the course were devoted to sharing ideas among groups. Also, each member received mimeographed copies of the summaries of each discussion group.

4. Individual plans.

The work of the study groups was so specifically keyed to individually-expressed interests and problems that it would seem likely that the individuals might well have developed tentative plans of action for later use in their schools. Beyond this, about six hours were scheduled for specific individual study on a personally selected topic. Consultation time was arranged, where pertinent, and each member wrote a brief summary of his plans for a particular program or project to be carried out in the following year.

At the end of the Leadership Course for School Principals, 1958, an evaluation was made (3). Each participant answered a questionnaire of thirty-five items specific to the course, under four headings: attainment of general purposes; general organization; activities; accommodation and facilities. The same instrument had been used for each of the two preceding courses. Weighted numerical values were used by respondents, in accordance with the instructions which accompanied the questionnaire:

- 5. Very well satisfied
- 4. Well satisfied
- 3. Fairly well satisfied
- 2. Somewhat dissatisfied
- 1. Frankly dissatisfied

The results of this evaluation are summarized in Table I.

As may be seen from Table I, the participants were "well satisfied" as, similarly, had been their predecessors in the two previous Leadership

TABLE I
SUMMARY OF THE PARTICIPANTS' EVALUATION
OF THE
LEADERSHIP COURSE FOR SCHOOL PRINCIPALS, 1958

Headings of the Questionnaire	Number of Items	Responses	
		Range	Mean
Attainment of general purposes	6	3.9 - 4.4	4.1
General organization	10	3.7 - 4.7	4.4
Activities	14	4.0 - 4.6	4.3
Accommodation and facilities	5	4.3 - 4.9	4.6
Whole Questionnaire	35	3.7 - 4.9	4.3

Courses in 1956 and 1957.

II. THE GENERAL PROBLEM

There is little doubt that the leadership courses have received wide approval. As indicated above, evaluation at the end of each course by participants was favorable, with the obvious inference that those who participated felt that they had benefited from their attendance. Individual boards of trustees have been required to pay substantial fees for the attendance of their nominees at these courses, and have continued to pay. Superintendents have continued to recommend participation by principals from their respective areas. Above all, the five sponsors of the course have continued their influential sponsorship. Such evidence indicates that there can be little doubt that a favorable opinion of the results of the leadership courses has been widespread.

The possible outcomes of such a course, of necessity, could be many. They would probably include various forms of knowledge and understanding, techniques, projects in inservice education, changes in operation, and interpersonal relationships. The inference might well be that results in these and other areas have been noted by both participants and sponsors, in order that the present degree of favorable opinion should have developed.

In its brochure (5, p. 2) the Leadership Course for School Principals was described as "an effort to improve the quality of leadership at the school level." The degree of approval has been shown to be extensive, and the inference noted that this continued approval would suggest that improvement in leadership had occurred at the school level. However, no organized system of evaluation was known to have been tried at the

school level. Therefore the general problem of this study was whether the quality of leadership was changed at the individual school level by participation in this type of course.

As a limiting factor, it was recognized that "this type of course" was too broad to investigate or evaluate. Therefore, the specific Leadership Course for School Principals, 1958, was selected.

III. THE PROBLEM

Statement of the problem. It was the purpose of this study (1) to measure the leadership of principals before and after their attendance at the Leadership Course for School Principals, 1958, by the use of a structured questionnaire which contained disguised items; (2) to measure leadership in an equal number of non-attendant principals who had been paired with the principals who attended the Leadership Course for School Principals, 1958, at the same time and in the same way; (3) to compare the degree of change within and between the two groups; and (4) to evaluate the change, and the techniques used.

Purpose of the study. Leadership has often been spoken of in an undefined way, but with the clear implication that it is an essential quality of the office-holder of principal of a school. Despite the rather general acceptance of the need for leadership in a school principal, tools by which to measure it, compare it, or evaluate it have largely been lacking. There have been instruments which purported to do this, but their effectiveness has not been very widely accepted in the past. The most common practice would seem to have been the observation of the results of the work of a principal, or the interpretation of interpersonal relation-

ships between the principal and the board of trustees, his staff, or the community, and the inference of the quality or degree of leadership therefrom. The purpose of this study was to attempt to evaluate change in the degree and quality of leadership, using a more definitely-structured technique.

IV. DEFINITIONS OF TERMS

Leader. A leader was held to be an office holder, an influencer, or a person appointed to carry out an influencing role in a group which worked together with a commonality of purpose and objectives (6, p. 3). It was recognized to be a position of permanence and appointment, rather than one awarded by a group to meet a particular situation requiring a solution. Specifically, in this study, a leader was a principal of a school of four teachers or more who had held that office for the year prior to the Leadership Course for School Principals, 1958, and for one school year after the time of the course.

Leadership. In Chapter II leadership will be shown consistently to have defied precise, generally-accepted definition in such a way that it might be comprised of measurable variables. Therefore, in this study, leadership was considered to be the acts or relationships of a leader in interaction with those whom he was appointed to lead. Intrinsic to this definition were two basic hypotheses: that leadership was not synonymous with "good leadership", but, rather, was a full range of behavior, and therefore subject to description and evaluation as separate, sequent processes; and that leadership was behavior in directing the activities of a group towards a shared goal within the expectations of the organization

within which the group worked, thus eliminating connotations adhering to leadership from former approaches to its study.

Leader behavior. Concomitant to the definition of leadership adopted for this study, the describable components were recognized to be items of specific behavior of the leader in interaction with the group he led. These, however, would be expected to be different in individual leaders, according to the demands made upon each position. However, Bell and French (1) concluded that the acts or relationships of a leader, as leader behavior in interaction, were consistent enough to be measurable over a period of time. Stogdill and Coons (6, pp. 6-38) reported the success of an inter-disciplinary committee, assembled at Ohio State University, in isolating items of behavior which excluded general traits and characteristics, and which described how a leader carried out his activities. These items were refined to apply to various kinds of groups and situations in a wide range of organizational structures. Thus, within the framework of these developments, leader behavior was accepted to be those acts and relationships which were common to leaders in a wide range of organizational structures which described what such leaders did in carrying out their job of orienting their group towards a shared goal.

Dimension. Items of leader behavior were classified by the Ohio Group (6, pp. 8-9) into areas, or clusters, which were called dimensions. Initially there were nine such dimensions which were postulated. Of these, two were isolated by research and analysis (6, pp. 39-51) as relatively mutually independent of each other, and sensitive, when applied to a wide range of different organizational structures in which appointed leaders

operated. These two dimensions were consideration and initiating structure in interaction. As reported by Darley (2), they were quite similar to variables postulated by others outside the Ohio Group, such as motivating and planning, group-need satisfaction and formal achievement, and feelings of personal worth and ways of satisfying these needs. The uniqueness of the Ohio Study lay in the identification of measurable dimensions of the reaction between the leader and his group, in which the dimensions emphasized behavior as a group and eliminated behavior which served only individual goal attainment.

Consideration. Consideration, as a dimension of leader behavior, was defined as "behavior indicative of friendship, mutual trust, and warmth in the relationship between the leader and members of his group." (4, p. 2)

Initiating structure. This dimension of leader behavior was defined as the delineation of channels of communication between the leader and the members of his group, in their interaction in working together towards a shared goal, and the continuity with which these channels were patterned and maintained in order to get the job done.

Course candidate. In this study this term referred to a principal who was selected to attend the Leadership Course for School Principals, 1958, who participated in it, and who was included as part of the sample of this study. Many more principals attended the course than became course candidates under this definition, for reasons later explained.

Like numbers. In this study a like number was a principal who was chosen to be a member of the control group, whose position, training, and experience closely approximated the qualities of his paired course candidate,

and who was supervised by the same superintendent as was his paired course candidate. He had not attended such a course as the Leadership Course for School Principals, 1958, up to the time of the end of this study.

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CHAPTER II

A REVIEW OF THE LITERATURE

I. HISTORICAL BACKGROUND

The organized study of leadership has been carried on for a great number of years, in many forms.

An early form which these studies took was the development of lists of personal traits, which assumed that leadership was a residual factor of the individual, by which he who had leadership traits would lead, and he who did not have them could not lead. This period was productive of much introspective and philosophical speculation. Coffin (2), in a review of the literature of this field, from twenty studies listed 167 traits: only four traits were common to four or more of the studies; many he found to be "circular" in the sense that they defined leadership in some more specific way, such as "good natural ability," "ability to lead" and "ability to make decisions"; and many more were extremely vague and difficult to define, such as "faith," "noble" and "common sense." In another comprehensive survey of the literature of the relationship of personal traits to leadership, Stogdill (19) pointed out two serious defects: that traits attributed in one study to leaders, in another study often were attributed to non-leaders; and that no effective means seemed to have been found to relate these personal factors to the social and economic structures within which they had been studied. Of this area of investigation Shartle (20, p. 1) wrote:

"The trait approach had reached an impasse before the beginning

of World War II. This may have been one of the reasons why leadership, per se, received relatively little emphasis as a research problem during the War."

Work with personal traits produced extensive writing, but little unified theory or testable research.

A second area of activity, which was more productive of research, was the investigation of personality characteristics and their relationship to leadership. Although also residual, personality characteristics were measurable and identifiable. Many of the more recent studies investigated them in relation to leadership by comparing them to some criterion measure of leadership, of which the commonest were peer ratings, observer ratings, and tests of leadership reported on by followers. In his very comprehensive survey of the literature of this type of investigation, Mann (14, pp. 246-252) summarized and reported on 752 studies of measured characteristics compared to criterion measures. In this review the greatest number of studies were reported to be concerned with the relationship between intelligence and measures of leadership. Of the 196 sets of data falling into this category of investigation, less than half found a significant relationship between intelligence and leadership at the five percent level of confidence or better. The highest correlations were between verbal-type tests of intelligence and measures of leadership. The only other category in which a large number of studies were done was the investigation of measures of adjustment and criterion measures of leadership. Of the 164 comparisons reported to be of this type, slightly less than one-third reported significant relationships. The remainder of the studies compared measures of extroversion, dominance, masculinity,

conservatism, and interpersonal sensitivity to measures of leadership. Few of these reported significant relations between these characteristics and leadership, and regarding none of the characteristics did a majority of the studies report significance between the characteristic and leadership. In summary, slightly more than one-third of the studies found significant relationships existed between measures of personality and leadership. The studies which Mann surveyed gave no encouragement to the investigation of leadership through the measurement of personality characteristics. Probably the most damaging point common to most of the studies in this field of research, as Mann pointed out (14, p. 25), was the questionable validity of the criterion measures used.

A third, currently active field of investigation of leadership dealt with the dynamic concept of groups. As expressed by Gibb (5), who quoted C. Burt:

"... the individual is never an isolated unit, and what the psychologist has to study are the interactions between the 'personality' and an 'environment'--the behavior of a dynamic mind in a dynamic field of which it forms a part."

More specifically, Linton (12) added:

"The place in a particular system which a certain individual occupies at a particular time will be referred to as his status with respect to that system. In so far as it represents overt behavior, a role is the dynamic aspect of a status: what the individual has to do in order to validate his occupation of a status."

The "behavior of a dynamic mind in a dynamic field," by playing a role as the justification of one's status in a group, generally provided a series of kaleidoscopic units which changed according to "a particular time". Roles could change, and leadership would be one role awarded by the group

to a series of temporary recipients, according to the series of problems at hand. Experimental studies were, therefore, often of brief duration, and dependent upon the proximity of a skilled observer or a group of coordinated and specially trained observers.

With reference to leadership on an organized basis, an uneasy association was developed within the dynamic field theory which recognized it more as a system of domination or headship, and only possibly, at the fiat of the group, actually as leadership.

Lippitt (13) and Lewin (11), and others, dealt with leadership styles: democratic, authoritarian, and laissez-faire. Research emanating from this body of theory was not commonly found to be applicable to large samples, or institutional leadership studies; rather, it approximated more the carefully controlled observational systems of laboratory-type experimentation.

Gibb (5) wrestled with the problems of measurement of leadership on behalf of the Australian Armed Forces, for close to ten years prior to 1947, and found no avenues of success in leadership selection. He then followed earlier and more conventional lines, but, after extensive analysis of the large body of data which he had collected, he concluded:

"It finally became evident that psychiatric and psychological assessment of the individual personality was not an adequate guide to leadership potential."

II. AN INTERACTION APPROACH TO LEADERSHIP

Another approach to the study of leadership evolved shortly after World War II. Stogdill (19), in his survey and analysis of the literature, reached much the same conclusion about leadership theory as had Gibb (5),

slightly earlier: that there was an absence of consistent traits of leadership, and even if there were consistent agreement, traits were difficult, if not impossible, to measure objectively; that former research which had investigated personal and personality characteristics as attributes of leadership, though extensive, had not proved encouraging, and that the field theories of leadership were of little service in the consideration of leadership in the organizations within society where leaders were externally appointed. On the basis of this Stogdill and others (20) postulated an interpersonal approach to leadership.¹

It was found that Bell and French (1), Fleishman (3), Gibb (6), Morris and Seeman (17), and Stogdill and Shartle (21) each dealt with aspects of the development of this body of theory of leadership. Summarized, the basic elements of this early, rudimentary theory were:

1. That leadership is a function of personality and of the social situation, and of the interaction of these two among persons who are participating in goal-oriented group activities;
2. That leadership may reside fairly consistently in a specific person in the group, and that in an organized group this individual may be the appointed leader;
3. That leadership, considered as the general quality of leaders, may have dimensions common to many forms of leadership;
4. That leadership is concerned with influencing the group to

¹The evolution of a body of theory relevant to leadership as a form of interpersonal behavior was developed separately in several different quarters, as was pointed out by Darley (18, pp. 357-366).

to attain objectives;

5. That leadership is also concerned with maintaining the cohesiveness of the group; and
6. That dimensions of leader behavior common to similar types of groups should have general characteristics common to all types of leader behavior in all types of groups.

This basic theory of the interaction approach to the study of leadership was developed into research by an interdisciplinary group of scholars associated with Ohio State University. They set out upon a program of related research studies which were concerned with leadership in those appointed to carry it out in organizations provided for in western society.

III. THE OHIO STATE LEADERSHIP STUDIES²

The program of related research which emanated from this group's development of this approach to the study of leadership was both complex and extensive. At its beginning it would appear, from any information known to this reviewer, that the rather limited body of theory, as summarized in the previous section, was not extensively developed before research commenced. Rather, it would appear more to be a basic rationale from which an on-going program of research was launched, and that the success of the research would be expected to formulate, or provide opportunity for the development of, the details of a body of theory of leadership.

²This title is the first five words of the preface to a symposium of papers which first described the initial research into leader behavior as interaction between an appointed leader of a group and the group he was appointed to lead. (20, p. vii)

One initial problem came from the rudimentary nature of the body of theory behind the structuring of the research. The term "leadership" held so many connotations both from scholarly disciplines and from popular conceptions, that definition in a form which provided clearly delineated variables for the purposes of measurement and research was impossible. However, the concept of interaction of behavior among members working together towards a common goal, and of leadership as a motivating function of that interaction, led to the decision to study the behavior of the leader. Earlier studies in this field had accepted leadership as "the behavior of an individual when he is directing the activities of a group towards a common goal," (20, p. 7) and, similarly, as "a function of personality and of the social situation, and of these two in interaction". (6, p. 917) Therefore the term "leadership" was left without more than this broad definition, and, as reported by Hemphill and Coons (20, pp. 6-38), attention was directed to the observation of phenomena of interaction in the behavior of leaders while directing groups towards shared goals, or while maintaining the cohesiveness of the group. This logical analysis of leader behavior was carried out vicariously by a board selected from several scholarly disciplines. It produced 1790 items. Logical analysis then refined these into 150 common phenomena of interaction thought to be most likely to be mutually exclusive, and were, again intuitively, grouped by similarity into clusters, called "dimensions", of which there were ten: integration, communication up, communication down, production emphasis, representation, fraternization (or membership), organization, evaluation (or recognition), initiation, and domination. This broadly based instrument

was then administered to large samples who described themselves as leaders, described what they thought leaders under them should do, and described what they thought their own leader did.

The resulting data were subjected to extremely detailed statistical and factor analysis. The research was for items and dimensions common to the several forms of investigation: self-description, description of an ideal, descriptions by superiors, and descriptions of those lower in the line of authority. From these complex and extensive processes it became apparent that many of the phenomena were highly interrelated, and that some of the hypothesized dimensions were significantly correlated. Therefore a revised form was drawn up which accepted those items and those dimensions which were relatively low in interrelation or not significantly correlated, and which related well to the general measures of adequacy. This became the first form of the Leader Behavior Description Questionnaire: Consideration (15 items), Initiating Structure (15 items), Production Emphasis (25 items); Social Awareness (25 items).

This original form of the L.B.D.Q. proved to have several weaknesses, as reported by Hemphill and Coons (20, pp. 35-37). Therefore, it, and adaptations of it, were used in several studies, each of which was given extensive analysis of the components of the instrument. Halpin and Winer (20, pp. 39-51) reported the factorial study of data obtained: it became apparent that only the two dimensions of consideration and initiating structure "accounted for 83 per cent of the total factor variance", and the present short form of the Leader Behavior Description Questionnaire thus was developed, incorporating only these two dimensions.

The Leader Behavior Description Questionnaire³ was composed, in total, of forty items, distributed as follows: consideration, fifteen items; initiating structure, fifteen items; and dummies (apparently serving the purpose of contributing to the "popular" concepts of leadership, in order to keep the respondents relaxed), ten items. The format of the questionnaire did not include any mention of dimensions, and items were presented in heterogeneous fashion. The following are the items collected according to dimensions: (9)

Consideration

1. He does personal favors for group members.
3. He does little things to make it pleasant to be a member of the group.
6. He is easy to understand.
8. He finds time to listen to group members.
12. He keeps to himself. *
13. He looks out for the personal welfare of individual group members.
18. He refuses to explain his actions. *
20. He acts without consulting the group. *
21. He backs up the members in their actions.
23. He treats all group members as his equals.
26. He is willing to make changes.
28. He is friendly and approachable.
31. He makes group members feel at ease when talking with him.

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- 34. He puts suggestions made by the group into operation.
- 38. He gets group approval on important matters before going ahead.

* Scored negatively.

Initiating Structure

- 2. He makes his attitudes clear to the group.
- 4. He tries out his new ideas with the group.
- 7. He rules with an iron hand.
- 9. He criticizes poor work.
- 11. He speaks in a manner not to be questioned.
- 14. He assigns group members to particular tasks.
- 16. He schedules the work to be done.
- 17. He maintains definite standards of performance.
- 22. He emphasizes the meeting of deadlines.
- 24. He encourages the use of uniform procedure.
- 27. He makes sure that his part in the organization is understood by all group members.
- 29. He asks that group members follow standard rules and regulations.
- 32. He lets group members know what is expected of them.
- 35. He sees to it that group members are working up to capacity.
- 39. He sees to it that the work of group members is co-ordinated.

Dummy Items

- 5. He acts as the real leader of the group.
- 10. He gives advance notice of changes.
- 15. He is the spokesman of the group.

19. He keeps the group informed.
25. He gets what he asks for from his superiors.
30. He fails to take necessary action.
33. He speaks as the representative of the group.
36. He lets other people take away his leadership in the group.
37. He gets his superiors to act for the welfare of the group members.
40. He keeps the group working together as a team.

The amount that has been written about the Leader Behavior Description Questionnaire, its development and uses, and the number of uses to which it has been placed, necessitate consolidation as well as critical evaluation. Therefore the following observations, supported in some detail, were drawn from the literature surveyed as being among the most important in order to understand the L.B.D.Q.:

1. In the development of this instrument the two dimensions of the L.B.D.Q. were constructed to be largely mutually independent of each other in the measurement of leader behavior. Halpin and Winer (20, p. 51) reported on behalf of the original factorial study which set up this instrument:

"The two scales are correlated to a moderate degree, but are sufficiently independent to permit the use of the Consideration and Initiating Structure scales as measures of different kinds of behavior."

Fleishman (20, p. 126) reported ten studies of correlation between the two dimensions. Five studies with small samples of less than eighty had correlations which were not

significant. Five studies with samples of from 100 to 394 produced three which were not significant, and two which had correlations significant at the .01 level. Two recent Alberta studies, however, have not enhanced these findings. McBeath (15, p. 113) reported that "the independence of the two dimensions was lower than desirable." Keeler (10, pp. 93-94) also reported a correlation at the .01 level of confidence between the two dimensions. Moreover, he investigated the independence of the two dimensions further, within several sub-samples, and found correlations as high as .758 between consideration and initiating structure. Thus, eight of the twelve known studies tended to confirm the independence of the two dimensions. There seems to be less confidence than was held initially that consideration and initiating structure are highly mutually independent in their measurement of leader behavior.

2. The L.B.D.Q. was reported by its designers to have satisfactory reliability. Halpin (9, p. 6), in the manual accompanying this instrument, submitted evidence of this nature. He reported estimated reliability by the split-half method to be .92 for consideration, and .83 for initiating structure. Of four studies by himself and one by Fleishman, he reported agreement among respondents about the same leader to be significant at the .01 level of significance in all cases. Fleishman (20, p. 125) reported two small studies of test-retest

reliability. One was after one month, and the other after three months. Positive correlations of significant proportion were obtained in both cases for both dimensions. He also reported (20, p. 111) on three studies of internal consistency within results, measured by the split-half technique, in which correlations were very high for consideration and satisfactory for initiating structure; all were significant at the .05 level, or better. At the same time he reported four studies of reliability, which he regarded as agreement among different respondents about the same leader, in which correlations were all significant. However, more recently, McBeath (15, p. 40) found that the corrected split-half reliability for the dimension of initiating structure was .75, and for consideration was .86, and therefore concluded (15, p. 113):

"The reliability of the initiating structure dimension was not considered satisfactorily high....."

The claim of reliability for the instrument seems to be reasonably impressive, with one exception noted above.

3. The validity of the Leader Behavior Description Questionnaire was less clearly depicted in the literature reviewed. Fleishman (20, pp. 127-133) investigated the relationship of one form of the L.B.D.Q. and fifteen independent measures of leadership effectiveness (20, p. 127). He found that they provided only one correlation with consideration at the .01 level of confidence, and a further two at the .05 level, no correlations at the .01 level with initiating structure, and one at the .05

level of confidence. He also reported correlations between the L.B.D.Q. and various psychometric and other measures of leadership (20, p. 129) and found that, out of thirty-five investigations one correlated significantly at the .01 level with consideration, and four more correlated with this dimension at the .05 level, five correlated significantly with initiating structure at the .01 level of confidence, and three more correlated at the .05 level. In all, out of one hundred investigations, seven could be said to have provided significant correlations with other measures of leadership, at the .01 level, and another ten were significant at the .05 level. In view of the historical review provided at the outset of this chapter, this might be said to be not altogether unexpected. However, a somewhat better case was found for what might be referred to as "pragmatic" validity--that the L.B.D.Q. had worked in practice. Rush (20, pp. 69-73) reported three studies of the correlation between the two dimensions of the L.B.D.Q. as general, measured descriptions of leader behavior, and five specific group dimensions. In nine out of fifteen instances consideration had a significant correlation with group dimensions, and in six of fifteen cases initiating structure had a significant correlation with other group dimensions. The L.B.D.Q. has also been used in a very wide range of leadership situations. Stogdill (20, p. vii) summarized the extent of such uses in studies as follows:

"The Leader Behavior Description Questionnaire has been administered in a wide variety of situations. It has been used for the study of the commanders and crew members of bomber crews in the Department of the Air Force; commissioned officers, non-commissioned personnel, and civilian administrators in the Department of the Navy; foremen in a manufacturing plant; executives in regional co-operative associations; college administrators; school superintendents, principals and teachers; and leaders in a wide variety of student and civilian groups and organizations."

This early stature in the hands of the Ohio Group and their associates has been borne out in a number of more recent studies. Halpin (9, pp. 75-78) used the L.B.D.Q. in the investigation of the leadership behavior of school superintendents, and found that there was a regular consistency within each of the three groups who described the behavior of the superintendents studied, both as to what they felt ought to be their behavior, and as to what their behavior actually was. He found, also, that the same consistency did not exist between the groups, but rather that each varied from the other in a logical and explainable way. McBeath (15) studied teachers' leader behavior, and in so doing supported the validity of the L.B.D.Q. when he concluded (15, p. 110):

"The most important conclusion was that part of teaching effectiveness appeared to be related to the extent of a teacher's Consideration and Initiating Structure behavior. The most effective teachers exhibited behavior that was described as being above the median of both dimensions while the less effective teachers exhibited behavior that was described as being below the median on both dimensions."

Greenfield (7) also supported the validity of the L.B.D.Q. in his study of the effect of leadership of teachers upon pupil

growth. He found that (7, p. 114-115):

"Initiating structure, as a dimension of leadership, is related to pupil growth",

and that:

"Consideration as a dimension of leadership is significantly related to growth, but that the extent of this relationship is smaller than that shown by initiating structure."

Also, he reported (7, p. 114):

"There is significant agreement among principals, other teachers, and students in their description of teacher leader behavior."

Keeler (10, pp. iv-v) added further support in his study of school principals, in that he reported:

"Significant differences between the distribution of the principals of the two groups on the leader behavior dimensions were found: principals of high productivity school tended to be above the mean on both Consideration and Initiating Structure, while those of low productivity schools tended to be below the mean on both."

Miklos (16, pp. 195-196), in his study of the leader behavior of principals, also found significant relationships between the two dimensions of the L.B.D.Q. to measures of the expectation of the principals' role by both principals themselves, and by their teaching staffs. In general, then, it would appear that there is a good case for pragmatic validity, as, in action, many researchers have found significant relationships between the L.B.D.Q. measures and measures that were indicative of the degree of leadership exercised in the situations of their studies. Darley (18, p. 360) summarized as follows:

"In the realm of definition, I think we have completely demonstrated, and overdetermined, two variables that first arose in the Ohio State University research on leadership: consideration and initiating structure. (He then indicated that several others had arrived at the same general dimensions in other studies of leadership outside this aegis.) In all these studies, research converges to give the reader greater assurance that these are true and relevant variables in understanding the behavior of individuals in either groups or organizations."

4. The Leader Behavior Description Questionnaire has some evident limitations. Seeman (20, pp. 86-102) reported a study of the comparison between the L.B.D.Q. and specific leader behavior descriptions. The specific instrument was designed specially for use in a school setting, using a status-factor approach. The specific instrument had somewhat higher intercorrelations between its four scales than have been reported between the dimensions of the L.B.D.Q. The two dimensions of the L.B.D.Q., as a "general" instrument, and the four scales of the "specific" instrument were correlated with measures of status, job-related attitudes, and personal history. Although one study is not a safe basis for generalization, particularly one with a fairly small sample such as this study employed, there was evidence: (1) that the "specific" scale did appear to be more effective in situations where fine differences were involved; and (2) that the L.B.D.Q. may need either quite large samples to take care of relatively large variances in description, or that it may actually provide molar description of leadership style rather than molecular and finely-proportioned descriptions, which the specific scales appeared to do more effectively.

This probable tendency towards rather gross measurement may be inferred, possibly, to its susceptibility to reflect a halo effect (because the "approved" answers to items are not hard for a respondent to forecast), and therefore to be influenced by a general feeling about the leader being described; or this may be inherent in the insistence upon only two dimensions, chosen in order to have them as nearly as possible mutually exclusive; or this may be inherent in the inclusion of leaders and non-leaders in the original sample, as an assumed parameter of leaders, for which there was no real proof--or attempted proof--in relation to actual, proved leadership. McBeath (15, p. 111) also seemed to infer that the rather gross measurement performed by the use of the L.B.D.Q. placed limitations upon its effectiveness when he concluded:

"Since the amount of agreement on both behavior dimensions (consideration and initiating structure) was not greatly different from the amount of agreement on effectiveness ratings, it was concluded that it was just as difficult to agree on certain aspects of what the teacher does in the classroom (acts of leader behavior) as it was to agree on how well he teaches in general."

He then went on to say (15, p. 113):

"One must conclude that the present Teacher Leader Behavior Description Questionnaire should not be used by any one set of judges and that all five viewpoints used in this study should be considered."

Halpin (8, pp. 75-78), much earlier, had reached similar conclusions. In his study of the leader behavior of school superintendents, he found that there was no more than chance

relationship between different groups describing the same individuals, though there was a significant relationship between respondents within the same group, even though they were in different locations and situations. These limitations appear to emphasize that the L.B.D.Q. is not universal in its sensitivity. They are not felt to deny that the L.B.D.Q. is not a most "likely" instrument for the investigation of leadership in an ordered group. However there is no evidence known to this reviewer to promote the use of this instrument as a "standardized test" of leadership levels.

5. The Leader Behavior Description Questionnaire has been used in many forms. The present "standard" form used in this study has been provided in Appendix "A". However, it should be emphasized that any review of the literature must encompass many variations. Fleishman (20, p. 122) used a form called The Leadership Opinion Questionnaire, which was made up of twenty items for each dimension, and no dummy questions. Fleishman (20, pp. 108-109) also used a forty-eight item adaptation referred to as the Supervisory Behavior Description Questionnaire. Still another form was used by McBeath (15), and later by Greenfield (7), named the Teacher Leader Behavior Description Questionnaire. The T.L.B.D.Q. was composed of thirty items, eight of which were somewhat varied from the present "standard" form. Other adaptations have probably also been used, for it is not always easy to recognize from the

literature the specifics of the form used. In part this came about, in the early stages of the research done by the Ohio Group and their associates, as a process of evolution and the result of factor analysis. In the words of Stogdill (20, p. vii): "Successive adaptations and revisions were made in the process of using the questionnaire." More recently, adaptations have been in the nature of changing the general wording of the "standard" form, which was considered universal in its application to almost all leadership situations, to a wording which was specifically applicable to a particular occupation or situation. Although it was probably intended that the meaning should not be altered, it should be recognized that individual initiative was involved, which might be contested. The large array of literature cuts across many forms of the instrument, and this reviewer could find no way of differentiating between them, as in most cases the original writers did not do so themselves, and seemed to assume that the various forms were synonymous.

6. The L.B.D.Q. has not been used extensively to study the effect of leadership courses. The only known study of this nature was reported by Fleishman (4) regarding a leadership course for foremen in industry. The course itself was heavily weighted with the human relations aspects of the foremen's work. Two conclusions of apparent importance were: that at the end of the course the foremen were higher in consideration

and lower in initiating structure, which was felt to reflect the major objectives of the course; and that, after the foremen had been back on the job for some time, they were found to be higher in initiating structure and lower in consideration, which was interpreted to mean that they had identified themselves with management, in practice. No other similar study was found. The rather definite emphasis of the course upon leader behavior in interaction between the foremen and the workers seemed, to the reviewer, to be almost directly structured to suit the instrument used to evaluate the course. In this respect the instrument seemed almost to be specific to the environment in which it was used, rather than a general measure of leader behavior. However, further use of this instrument in the study of the effects of a leadership course upon behavior was felt to be logical, in view of the apparent successful use of the L.B.D.Q. in this one instance, and in view of the stature which it had developed in the description of the behavior of leaders.

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CHAPTER III

PROCEDURE

I. DESIGN OF THIS STUDY

The L.B.D.Q. was used to gather data regarding two groups of principals: twenty-two principals who attended the Leadership Course for School Principals, 1958; and twenty-two paired like number principals who had not attended such a course. The L.B.D.Q. was used to gather descriptions of leader behavior about each of the principals in each of these two samples from:

1. The superintendents of each pair of principals.
2. The teaching staff of each principal.⁴
3. Each principal himself.

The L.B.D.Q. was administered twice to each set of respondents:

1. Just before the time of the course, in May and June of 1958.
2. A year later, in May and June of 1959.

The statistical analysis of the data obtained in these ways was divided into four stages:

1. To test the significance of the change within each group of principals after the course as compared to before it, for

⁴Less than four respondents per principal were not accepted. Where more than twelve teachers constituted the teaching staff headed by the principal, only twelve L.B.D.Q.'s were handed out at random. Halpin (2, p. 7) reported: "Experience suggests that a minimum of four respondents per leader is desirable, and that additional respondents beyond ten do not increase significantly the stability of the index scores. Six or seven respondents per leader would be a good standard."

- each of the two dimensions of leader behavior.
2. Using the comparisons of stage 1, to test the significance of the difference between the change within the course candidate group and the change within the like number group, for each of the two dimensions of leader behavior.
 3. To test the significance of the difference between the course candidate group and the like number group before the course, for each of the two dimensions of leader behavior, and then to test the same differences after the course for the same dimensions.
 4. Using the comparisons of stage 3, to test the significance of the relative difference between the two groups after the course and the relative difference before it, for each of the two dimensions of leader behavior.

The first stage of the statistical analysis was designed to indicate what change, as measured by the dimensions of the L.B.D.Q., occurred during the time of this study in the course candidate group and the like number group, separately, in both consideration and initiating structure. The second stage was designed, then, to compare these two degrees of change, between the course candidate group who took the course, and the like number group who were the control group. The third stage was designed to indicate what difference, as measured by the dimensions of the L.B.D.Q., existed between the two groups of principals before the course, and then after the course. The fourth stage was designed, then, to compare the degree of difference between the two groups of principals after the course to the

degree of difference which existed before it.

II. SELECTION OF SAMPLES

The samples of principals selected for this study were, as indicated earlier, twenty-two principals who attended the Leadership Course for School Principals for two weeks in July 1958, and twenty-two paired principals who had not attended a similar course. To arrive at these final samples was a long process which could not be finished until almost a year after the course had been completed.

Because course attendance was by nomination of a school board, according to a plan adopted by the administrative officers of the course, the superintendents of all educational units were contacted by letter and an information-gathering questionnaire. With one exception every superintendent agreed to promote the proposed plan, and all superintendents provided the information requested. This provided a gross list of sixty-seven course candidates and fifty-five like numbers.

The sixty-seven original course candidates were very shortly reduced to fifty-eight because seven decided not to attend the course soon enough to be excluded from the initial testing, and two refused to invite staff participation. Other late appointees could not be included because of lack of time to administer the L.B.D.Q. to the teachers in their schools.

The like numbers were designated by their superintendents upon the following basis:

1. They must not have attended a previous Principals' Leadership Course.
2. Each should have had as nearly as possible the same academic

and professional training and years of administrative experience as his paired course candidate.

3. Each must be the principal or vice-principal of a similar type and size of school under the supervision of the same superintendent.

Of the original fifty-five like numbers nominated, inspection of the pairs eventually eliminated twelve as being grossly disparate. However, before pairs could be decided, because of the nearness of the end of the school year, all possible course candidates and like numbers were included in the first run.

The first run of the L.B.D.Q. to gather data for this study was made with the following samples:

Course candidate principals	58
Like number principals	46
Superintendents	41

All first-run testing had to be done on this sample, as it was impossible to foretell which would be available to continue during the next year.

In October, 1959, a check of each participant was carried out.

Many had to be dropped for various reasons, such as:

1. Some principals had moved to another location.
2. Some principals had been transferred to another school or to other work.
3. Three superintendents had moved, or retired.

The final sample of course candidates had to be in the same school as before, as also had to be all the like numbers, and the superintendent

of each pair had to be the same person as before. Since teachers move about in such large numbers, it was felt to be impossible to control this variable.

The final sample was as follows:

Course candidates	22
Like numbers	22

These fulfilled as nearly as possible all the requirements described.

III. COMPARISON OF SAMPLES

The gathered data describing the pairs of principals in the two samples, the twenty-two who attended the course, and the twenty-two like numbers, are presented in Table II.

It is evident that these two groups are not perfectly matched. There was no known way of selection other than to do the best possible with what was left after the summer, if the study was to attempt to maintain the controls for which it was originally designed. However, the degree of similarity in the pairs was felt to be reasonably high.

Using the data presented in Table II, the following information about the samples was derived:

1. The "average" course candidate of this study was a man (only one woman was included), who was principal of a staff of thirteen teachers, was free from teaching six hours a week, had no clerical assistance (only four of twenty-two had), had taught for sixteen years, had been an administrator for nine years, had been in his present position for five years, and held one degree.

TABL

COMPARATIVE INFORMATION CONCERNING PAIRS OF PRINC

Type of School (Grades)		Number of Teachers		Position		Number of Admin. Assistants		Time free weekly from teaching (hrs.)	
CC	LN	CC	LN	CC	LN	CC	LN	CC	LN
I-XI	I-XII	11	14	P	P	0	0	5	4 $\frac{1}{2}$
I-XII	I-XII	10	12	V/P	V/P	-	-	2	3
I-XII	I-XII	5	9	P	P	0	0	0	0
I-XII	I-XII	9	7	P	P	1	1	2 $\frac{1}{4}$	1 $\frac{1}{2}$
I-IV	I-IV	6	8	P	P	0	1	0	0
I-XII	I-XII	13	14	P	P	1	0	4 $\frac{1}{2}$	10
I-XII	I-XII	13	12	P	P	0	1	3	2 $\frac{1}{2}$
I-XII	I-XII	10	9	V/P	V/P	-	-	2	3
I-VII	I-VII	15	17	P	P	2	0	20	16
I-VII	I-VII	10 $\frac{1}{2}$	18 $\frac{1}{2}$	P	P	1	1	12 $\frac{1}{2}$	20 $\frac{1}{2}$
I-XII	I-XII	17	11	P	P	1	1	15	3 $\frac{1}{2}$
I-XII	I-XII	10	7	P	P	1	0	1	0
I-XII	I-XII	23	22	P	P	1	1	9	11 $\frac{1}{2}$
I-XI	I-XI	10	9	P	P	1	0	1 $\frac{1}{2}$	1 $\frac{1}{2}$
I-XII	I-XII	12	14	P	P	1	0	18	3
I-IX	I-IX	21	14	P	P	0	0	1 $\frac{1}{2}$	15
I-XII	VIII-XII	16	14	P	P	2	1	10 $\frac{1}{2}$	9
I-XII	I-XII	9	10	P	P	1	0	6	5
I-VI	I-VI	19	23	P	P	1	1	16 $\frac{1}{2}$	17
I-XII	I-XII	16	13	P	P	0	0	0	0
I-XII	I-XII	14	10	P	P	1	1	7	3
I-X	I-X	17	11	V/P	V/P	-	-	0	2
Sum:		286 $\frac{1}{2}$	278 $\frac{1}{2}$	19P 3V/P	19P 3V/P	15	9	137 $\frac{1}{4}$	130 $\frac{1}{2}$
Mean:		13	12 $\frac{1}{2}$.7	.4	6.3	5.9

NOTE: Each pair of columns compare a course candidate (CC) and his order of pairs of principals is scrambled so that no comparison may be

E II

IPALS WHO CONSTITUTED THE SAMPLE OF THIS STUDY

Clerical help (hrs.)		Total years teaching		Total Yrs. as Princ. or Vice		Duration of present position (yrs.)		Degrees	
CC	LN	CC	LN	CC	LN	CC	LN	CC	LN
0	0	12	25	5	10	5	2	BEd	BEd
4	0	19	7	12	2	10	1	BEd	-
0	0	0	16	0	6	9	4	BSc BEd	BSc
0	0	10	14	2	9	0	3	-	BSc BEd
0	0	15	20	4	6	2	6	BEd	-
0	0	8	22	8	11	8	6	-	BEd
0	0	6	14	5	6	4	6	BSc BEd	BA BEd
0	0	7	10	2	6	0	4	BEd	BEd MEd
8	6	22	16	13	5	0	2	-	BA BEd
0	9	25	28	4	19	2	2	BA	BEd
0	0	19	18	7	13	1	10	BA BEd	BEd
0	0	7	13	4	9	2	7	BEd	BEd
0	0	25	20	12	5	12	2	BEd	BEd
0	0	20	18	8	10	4	5	BSc BEd	BEd
0	0	9	18	8	10	8	2	BSc BEd	BA BEd
0	0	6	7	4	5	2	5	MEd	BA BEd
3	0	29	33	16	25	0	14	-	BA BEd
0	0	16	20	12	13	3	4	BEd	BEd
3	7	30	27	21	18	7	18	BEd	-
0	0	30	18	17	5	13	4	BA BEd	BSc
0	0	16	32	11	26	5	4	BEd	BA BEd
0	0	18	35	15	29	8	9	BEd	BEd
18	22	358	431	199	248	105	120	7 (2 degrees) 8	
								11 (1 degree) 11	
		16.3	19.6	9	11.3	4.8	5.5	4 (No degrees) 3	

paired like number (LN) in each of ten categories. Also, in this table the made with any subsequent table.

2. The "average" like number of this study was also a man (only two women were included), who was principal of a thirteen-teacher staff, was also free from teaching for about six hours a week, also had no clerical assistance (only three had), had taught a little longer (for twenty years), had been an administrator for two years longer (11 years), had been in his present position also for about five years, and also held one degree. In general, therefore, the "average" member of both groups was quite similar: the majority were "old hands" both at teaching and at being a principal.

IV. THE DATA-GATHERING PROCEDURE

In April of 1958 contact was made by letter with all superintendents of school authorities likely to nominate candidates for the Leadership Course for School Principals to be held in the following July. Each superintendent indicated the probable course candidates from his area and the possible like number for each nominee. On May 5, 1958, a letter was sent to all probable course candidates and like numbers explaining the projected study, and it was accompanied by the Leader Behavior Description Questionnaire for the principal's own use, for his self-description, as part of this study.

As these L.B.D.Q.'s came back from the principals, packages containing the teachers' copies of the questionnaire were sent to the principals. Each principal was asked to hand out the questionnaires in the sealed envelopes in which they were provided, to ask each teacher to respond as instructed within, and to emphasize that responses were to be

anonymous and to be returned individually in self-addressed, stamped envelopes provided in the sealed envelope of instructions and questionnaire. A potentially sensitive problem of professional ethics for the teachers was thus circumvented: the principals had personal experience with the instrument and thereby were acquainted with its contents; each principal was free to refuse to give the questionnaires to his teachers, though only two of one hundred and four did refuse; and, when the principal did give out the questionnaires, he demonstrated to his teachers that he was promoting the project.

Finally, the superintendents were also contacted by letter on May 5, 1958. As well as providing a copy, with instructions, of the L.B.D.Q. to be made out for each course candidate and like number under his supervision, the letter asked each superintendent to promote the project actively by contacting each principal and his staff in its favor. The very large return was probably attributable to the very fine support given by superintendents and principals.

The returns of the first run of the L.B.D.Q. to gather data are indicated in Table III.

As was explained earlier, a heavy drop-out was experienced before the following school year was commenced. Therefore the total response to the first run of questionnaires had to be stored until the final sample could be set up in the early part of the following school year. Again, the superintendents provided unanimous support when, in the early part of 1959 they responded with the information requested concerning those who were still in the same position as they had occupied at the time of the

TABLE III
THE RETURN OF LEADER BEHAVIOR DESCRIPTION QUESTIONNAIRES
JUNE 21, 1958

Respondents	Number contacted	Number returned	Percentage returned
Teachers about principals	961	576 *	60
Principals about themselves	102	102	100
Superintendents about principals	51	51	100

*Within another month this number increased to a little over 600.

first run of questionnaires.

On May 4, 1959, a procedure was followed to gather the second set of data which was similar to that of a year earlier. The principals were sent a package of sealed envelopes, one for each teacher up to a maximum of twelve. As before, these envelopes had instructions printed on the face, and sealed in each was one copy of the L.B.D.Q., and a self-addressed stamped envelope in which to return it anonymously. Also, to each principal was sent a copy of the L.B.D.Q. for his own self-evaluation of his behavior during the past school year. The superintendents received the same instrument as did the principals and teachers, and were asked to complete it as they felt it described each principal under his supervision during the current school year.

The returns of the second run of questionnaires are tabulated in Table IV.

With regard to the returns indicated in Table IV it may be noted readily that both superintendents and principals again gave exceptional support to this study. Teachers, who responded anonymously, replied in satisfactory numbers; the requirement of Halpin (2, p. 7) that there be a minimum of four responses per principal was adhered to. As may be seen, also from Table IV, the number of responses by teachers on behalf of each group of principals was substantially the same in June 1959 as it had been in June 1958.

V. SCORING THE QUESTIONNAIRES

The raw data consisted of the responses to 418 questionnaires received by the end of June 1958, and to 398 questionnaires received by

TABLE IV
THE RETURN OF LEADER BEHAVIOR DESCRIPTION QUESTIONNAIRES
JUNE 30, 1959

Respondents	Number contacted	Number returned	Percentage returned
Teachers about course candidates (N = 22)	287	171(182)	60
Teachers about like numbers (N = 22)	279	161(170)	58
Superintendents	22	22 (22)	100
Principals	44	44 (44)	100

NOTE: figures in parentheses indicate the number of responses on behalf of these samples by the end of June, 1958.

the end of June 1959. These numbers of questionnaires were the sums of all questionnaires returned by the three classifications of respondents on behalf of the final sample selected in the spring of 1959, as indicated in Table IV.

Each questionnaire contained forty items, of which only thirty were marked. Of the thirty items which were marked, fifteen were pertaining to the leader behavior dimension of consideration, and fifteen pertained to the leader behavior dimension of initiating structure. The items associated with each of the dimensions are listed on pages 19 and 20. Each item had five possible responses, which were marked according to Table V. Thus, each dimension had a value of from 60 to 0.

In order to provide for accuracy in marking the questionnaires a special pair of stencils were made, one for each dimension, which fitted a special board made to coordinate the stencils to the printed registration of the questionnaires. Scoring was then done by hand, using these stencils on the registration-control board.

VI. ANALYSIS OF DATA

In order to analyse the data gathered, the following plan was decided upon:

1. For each principal within each group of principals, (the course candidate group, and the like number group) the score for each dimension after the course was compared to the respective score before the course. The null hypothesis tested was that there was no difference within each group, between after the course and before it, for either dimension.

TABLE V
SCORING VALUES USED IN MARKING
THE LEADER BEHAVIOR DESCRIPTION QUESTIONNAIRE

Responses	If positively scored	If negatively scored *
Always	4	0
Often	3	1
Occasionally	2	2
Seldom	1	3
Never	0	4

*Negative scoring was used in items 12, 18, and 20 of the L.B.D.Q., as part of the dimension of consideration.

2. For each related pair of principals, between the two groups of principals, the score for each dimension was compared, first before the course, and then after it. The null hypothesis tested was that there was no difference between the groups, for either dimension, either before the course or after it.
3. Finally, an intercomparison was made of ratios of change, first as established in step 1 above (within each group), and then as established in step 2 (between the groups). The null hypotheses tested were: that there was no difference between the ratio of change within each of the two groups of principals before the course, or after it, for either dimension; and that there was no difference between the ratios of change between the two groups after the course as compared to before it, for either dimension.

In order to accomplish this plan for the analysis of data, it was then necessary to select suitable procedures and tests for each of these three steps:

1. In order to depict the difference within each group, between after the Leadership Course and before it, signs were used. These were assigned by meaning: a positive sign meant that the score of the principal after the course was greater than it was before it; and a negative sign showed that the score before the course was higher than that after it. The significance of this relationship of signs was then tested by the use

of The Sign Test.

2. The differences between matched pairs of principals (one being a member of the course candidate group and the other of the like number group) were also depicted by the use of signs. These signs meant: a positive sign indicated that the score of the course candidate exceeded that of his matched like number; and a negative sign showed that the score of the like number exceeded that of his matched course candidate. The significance of this relationship was also tested by the use of The Sign Test.
3. The intercomparison of the ratios of change within each of the two groups of principals was accomplished by comparing the sign-ratios developed in step 1 above. These formed a 2 x 2 table, and were then tested for significance by the application of the chi-square. Similarly, the intercomparison of the ratios of change between the two groups of principals, after the course as compared to before it, was also accomplished by comparing the sign-ratios developed in step 2 above. These also formed a 2 x 2 table, and were then tested for significance by the application of the chi-square.

The Sign Test

The sign test mentioned in this sub-section is The Statistical Sign Test of Dixon and Mood, published by Kenney and Keeping (3, pp. 207-209) under the title The Sign Test for Differences in Paired Samples.

These authors (3, p. 208) provided a table of critical scores of r relevant to this test, of which the part which is relevant to the range of scores found in this study is shown as Table VI. The Sign Test provides critical values of r , significant at the .05 or the .10 level of confidence. The value of r is defined as the lesser absolute value of the two signs which are used to designate the differences in paired samples. The test indicates the degree of significance between two absolute numbers; the sign designates the meaning according to the reason for which it was ascribed. To illustrate, using a hypothetical situation, let us assume that there are sixteen pairs of principals, one of each pair having attended the leadership course and the other being the control. If thirteen of the course candidates had higher scores in consideration than had their respective like numbers, and three of the like numbers had higher scores than had their respective course candidates, using signs as indicated in item 2, page 48, of the plan for procedure in the analysis of the data used in this study, these data would be designated as +13 and -3. From Table VI, for sixteen pairs, r must be three, or less, in order that there may be said to be a significant difference between the paired samples. In this case the signs indicate that the course candidate principals were significantly higher in consideration than their like numbers.

TABLE VI
CRITICAL VALUES OF r
FOR
THE SIGN TEST FOR DIFFERENCES IN PAIRED SAMPLES

N	.05 level of confidence	.10 level of confidence
15	3	3
16	3	4
17	4	4
18	4	5
19	4	5
20	5	5
21	5	6
22	5	6
23	6	7
24	6	7
25	7	7

NOTE: This table is for a two-tailed test.
For a one-tailed test, the significant level should
be halved.

REFERENCES FOR CHAPTER III

1. Ferguson, George A., Statistical Analysis in Psychology and Education. New York: McGraw-Hill Book Company, Incorporated, 1959.
2. Halpin, Andrew W., Manual for the Leader Behavior Description Questionnaire. Columbus, Ohio: Bureau of Business Research, College of Commerce and Administration, The Ohio State University, 1957.
3. Kenney, J. F., and E. S. Keeping, Mathematics of Statistics. New York: D. Van Nostrand and Company, Incorporated, 1954.

CHAPTER IV

FINDINGS

There were two guiding purposes in presenting the findings of this study of twenty-two principals who attended the Leadership Course for School Principals, held at Concordia College, Edmonton, July 7-18, 1958, and twenty-two paired, like number principals who had not attended any similar course. The first purpose was to describe such changes in leader behavior as were to be found by inspection of the two dimensions of consideration and initiating structure measured by the Leader Behavior Description Questionnaire. The second was to evaluate by statistical means the significance of these changes.

Since there were three sets of respondents (teachers, superintendents, and the principals themselves), the data relevant to each set of respondents were analyzed separately.

I. TEACHERS' RESPONSES

Each staff of teachers varied in its number of responses from four to twelve. Therefore, the mean of each staff's responses was computed. These data are presented in Table VII.

In order to interpret these data the plan of analysis on pages 46 and 48 was implemented, using the procedures and tests outlined on pages 48-50.

The first step of this plan was to compare the score of each principal after the course to his score before the course. If his score after the course was higher than it was before the course, a positive sign

TABL

THE LEADER BEHAVIOR DESCR
ASCRIBED MEAN SCORES OF

Course Candidates (N = 22)

Principal's number	Consideration		Initiating structure	
	Before course	After course	Before course	After course
1	46.4	39.7	42.3	38.6
5	41.6	55.3	50.2	46.9
8	47.0	48.8	37.3	36.6
10	44.8	46.4	44.0	42.7
18	47.4	46.6	44.0	42.4
20	43.8	46.4	39.0	39.6
22	46.5	51.8	34.5	43.5
24	44.0	37.5	42.7	40.1
26	42.6	38.7	41.9	43.2
31	49.8	50.0	44.4	41.7
38	47.7	44.6	41.9	37.8
40	54.9	49.4	43.1	43.4
44	43.7	52.6	36.1	41.3
50	38.0	44.1	34.2	42.7
52	41.0	47.5	43.2	44.1
54	27.9	32.4	38.4	38.4
56	32.3	20.6	31.0	31.6
72	53.4	49.3	45.4	46.0
84	47.4	48.2	41.9	37.2
88	37.0	40.4	47.0	50.4
92	38.0	43.4	46.2	48.6
100	56.1	53.2	42.3	34.8

NOTE: The order of principals, and the order of pairs of principals fore, in keeping with the assurance of anonymity given to principals who

E VII

PTION QUESTIONNAIRE:
EACH TEACHING STAFF

Like Numbers (N = 22)

Principal's number	Consideration		Initiating structure	
	Before course	After course	Before course	After course
2	47.2	46.5	34.6	35.0
6	32.2	28.6	19.8	18.2
9	43.6	48.6	29.6	34.9
11	48.1	50.1	40.4	43.2
19	47.9	40.1	43.0	40.9
21	46.7	47.0	47.0	43.0
23	52.0	51.4	44.9	43.8
25	41.8	40.4	43.1	46.3
27	38.2	35.6	45.7	49.1
32	48.2	52.1	43.3	45.3
39	51.7	48.7	45.1	43.6
41	49.3	47.7	34.8	39.5
45	43.5	46.6	46.5	45.1
51	41.2	43.0	39.2	41.4
53	48.9	49.5	46.5	47.6
55	49.0	42.3	46.1	43.3
57	41.8	43.5	38.0	40.8
73	47.5	47.4	45.5	43.4
85	51.9	54.2	52.3	46.8
89	53.8	42.0	49.0	49.8
93	45.6	43.6	39.0	39.8
101	50.5	48.8	34.1	36.8

on this chart are completely different from that used in Table II. There-
took part in this study, no inferences of identity may legitimately be made.

was recorded; if the reverse was true, a negative sign was given. This procedure, (described in more detail on pages 42 and 44) provided the distribution of values shown in Table VIII.

From Table VIII it may be noted that for neither consideration nor initiating structure was either the course candidate group or the like number group significantly different after the course than it was before it. Actual differences, though not statistically attributable to other than chance, indicated that course candidates were slightly higher in consideration after the course than they were before it, while like numbers were slightly higher in initiating structure and lower in consideration.

From the same data provided by the responses of teachers (Table VII) the next step of the initial plan was consummated. This was a comparison between the two groups, for each of two dimensions, first before the course, and then after it. In this comparison, if the course candidate scored higher than his like number, a positive sign was awarded; if vice versa, a negative sign was given. The Sign Test for Differences in Paired Samples was again applied. This information is shown in Table IX.

From Table IX it may be seen that in no case did either sign meet the maximum value under which r may be considered to be significant at the .05 level of confidence. Therefore, for neither consideration nor initiating structure was the course candidate group significantly different from the like number group either before or after the course. Observed differences, though not statistically attributable to other than chance, indicated that before the course the members of the like number group were slightly more often rated higher in both consideration and initiating structure

TABLE VIII

COMPARISON OF EACH GROUP OF PRINCIPALS
AFTER THE TIME OF THE COURSE TO BEFORE THE COURSE
ACCORDING TO TEACHERS' RESPONSES TO THE L.B.D.Q.

Group	Dimension	Signs*		Value of r to be signif- icant	Sign Test: are paired samples significantly different?
		+	-		
Course candidates	Consideration	13	9	5	No
	Initiating structure	11	10	5	No
Like numbers	Consideration	9	13	5	No
	Initiating structure	13	9	5	No

*See pages 49-51 for a detailed explanation of the use of signs in the process of comparison, and the use of the Sign Test for Differences in Paired Samples as the test of significance in this situation.

TABLE IX
COMPARISON OF COURSE CANDIDATE PRINCIPALS
TO THEIR LIKE NUMBERS
ACCORDING TO TEACHERS' RESPONSES TO THE L.B.D.Q.

Time	Dimension	Signs*		Value of r to be signif- icant	Sign Test: are paired samples significantly different?
		+	-		
Before the Course	Consideration	9	13	5	No
	Initiating structure	9	13	5	No
After the Course	Consideration	10	12	5	No
	Initiating structure	9	13	5	No

*See pages 49-51 for detailed explanation of the use of signs in the process of comparison, and the use of the Sign Test for Differences in Paired Samples as the test of significance in this situation.

than were their corresponding course candidates. After the course there was little observed difference between the two groups in consideration, but a slight superiority for the like number group in initiating structure.

The third step in the initial plan for analysis of the data provided by teachers' responses, shown in Table VII, was then proceeded with. The first half of this procedure of intercomparisons used the data presented in Table VIII: from these ratios of superior scores after the course to superior scores before the course, a comparison was made between the course candidate group and the like number group to test the significance of the differences between the degree of change in each of the groups during the time of this study, for each of the two dimensions. The resulting 2 x 2 tables are shown in the first half of Table X. The second half of this procedure used the data presented in Table IX: from these ratios of superiority between the two groups before the course, and then after it, a comparison was made between the relative ratio between the two groups after the course to the relative ratio between them before it, in order to test the significance of the difference between these relative ratios at these two times. This was done for each of the two dimensions. The resulting 2 x 2 tables are shown in the second half of Table X.

From the first half of Table X it is apparent that there was no significant difference between the degree of change within the course candidate group and the degree of change within the like number group, over the year within which the course was held, in either consideration or initiating structure. In neither case was the difference between the ratios of the two groups for either consideration or initiating structure

TABLE X
COMPARISON OF CHANGE WITHIN GROUPS AND BETWEEN GROUPS
ACCORDING TO TEACHERS' RESPONSES TO THE L.B.D.Q.

Type of comparison	Consideration	χ^2*	Initiating structure	χ^2*								
(Within groups)												
	+ -		+ -									
Course candidates after to before the course vs. Like numbers after to before the course	<table><tr><td>13</td><td>9</td></tr><tr><td>9</td><td>13</td></tr></table>	13	9	9	13	1.46	<table><tr><td>11</td><td>10</td></tr><tr><td>13</td><td>9</td></tr></table>	11	10	13	9	.20
13	9											
9	13											
11	10											
13	9											
(Between groups)												
Course candidates com- pared to like numbers before the course vs. Course candidates com- pared to like numbers after the course	<table><tr><td>9</td><td>13</td></tr><tr><td>10</td><td>12</td></tr></table>	9	13	10	12	.09	<table><tr><td>9</td><td>13</td></tr><tr><td>9</td><td>13</td></tr></table>	9	13	9	13	.00
9	13											
10	12											
9	13											
9	13											

*In order to be significant at the .05 level of confidence it is necessary that $\chi^2 \geq 3.84$

significant at the .05 level of confidence. However, for consideration an observable difference did occur: the teachers' responses indicated that the course candidate group made slightly more improvement in consideration, as compared to their like number group, during the same period of time.

From the second half of Table X it is noted that there was no significant difference between the relative relationship between the course candidate principals and their respective like number principals after the course as compared to before it. Actual observed differences which did occur were so slight that there was no discernible difference between the relative relationship after the course when compared to the relative relationship before it, for both consideration and initiating structure.

Recapitulation: The findings regarding the L.B.D.Q.-Teachers' Responses may be summarized as follows:

1. From Table VIII:

- a) The course candidate principals were not significantly different in consideration after the course than they were before it. However, they were observed to be slightly more often rated higher in consideration after the course than they were before it.
- b) The course candidate principals were not significantly different after the course, in initiating structure, than they were before it. Moreover, the observed difference was so slight as to be negligible.
- c) The like number principals were not significantly different in consideration after the course than they were before it.

However, they were observed to be slightly more often rated lower in consideration after the course than they were before it.

- d) The like number principals were not significantly different in initiating structure after the course than they were before it, but they were observed to be slightly more often rated higher in initiating structure after the course than they were before it.

2. From Table IX:

- a) Before the course no significant difference was found between the two groups of principals in consideration. However, the like number principals were observed to be slightly more often rated higher in consideration.
- b) Before the course no significant difference was found between the two groups of principals in initiating structure, but the like number principals were observed to be slightly more often rated higher in initiating structure.
- c) After the course no significant difference was found between the two groups of principals in consideration. Moreover, almost no difference was discernible by observation of the data.
- d) After the course no significant difference was found between the two groups of principals in initiating structure, though the like number principals were observed to be slightly more often rated higher in initiating structure.

3. From Table X:

- a) For consideration the degree of change within the course candidate group during the time of this study was not significantly different from the degree of change which occurred in the like number group. However, there was an observable small difference in the degree of improvement in the course candidate group when contrasted with the degree of regression in the like number group.
- b) For initiating structure there was no significant difference between the degree of change within the course candidate group and the degree of change within the like number group of principals. Moreover, there was little observable difference in the degree of change that occurred in either group during the time of this study.
- c) For consideration there was no significant difference between the degree of difference between the pairs of principals after the course and the degree of difference between them before it. Also, there was little observable difference in the degree of change which occurred within the two groups, in consideration, over this two-year period.
- d) For initiating structure there was no significant difference between the degree of difference between the pairs of principals after the course and the degree of difference between the pairs of principals before it. In fact, the degree of change in each of the groups was almost identical.

II. SUPERINTENDENTS' RESPONSES

Each superintendent reported on a pair of principals: a course candidate, and a like number principal. The same superintendent reported on the same pair of principals both before and after the course. The data gathered by these responses are presented in Table XI.

In order to interpret these data, the plan formulated at the outset and explained on pages 46 and 48 was followed.

In order to analyze evidence of change within each of the two groups of principals being studied, for each of the two dimensions of the L.B.D.Q., it was again decided to assign positive and negative signs to indicate a higher score after the time of the course, or before it, respectively. The Sign Test of Differences in Paired Samples was then again applied. A summary of these signs, the respective critical values of r for the Sign Test, and the indication of significance of differences, or the lack of it, are given in Table XII.

From Table XII it may be seen that in no case did either sign meet the maximum value under which r may be considered to be significant at the .05 level of confidence. Therefore, no significant difference could be claimed to have taken place in either the course candidate group of principals, or in the like number group, over the period of this study, within which the Leadership Course took place. However, from Table XII it may be observed that there were some slight differences in how superintendents viewed each of these groups over the two-year period of this study: they did feel that there was a slight improvement in the group of principals who attended the Leadership course, in both consideration and initiating

TABL

THE LEADER BEHAVIOR DESC
ASCRIBED SCORES OF

Course Candidates (N = 22)				
Principal's number	Consideration		Initiating structure	
	Before course	After course	Before course	After course
1	46	48	42	42
5	48	53	42	39
8	49	34	18	22
10	43	46	40	44
18	40	46	40	47
20	53	54	45	49
22	49	52	35	42
24	51	41	54	48
26	50	44	33	36
31	47	48	37	37
38	50	50	42	40
40	49	47	46	44
44	40	40	24	28
50	48	45	45	47
52	45	49	49	48
54	40	35	46	41
56	25	30	24	32
72	54	50	39	38
84	47	48	44	41
88	42	46	45	52
92	48	49	37	40
100	44	48	37	38

NOTE: The order of principals is the same as that used in Table completely different from that used in Table II, in order to preserve the

E XI

RIPTION QUESTIONNAIRE:
SUPERINTENDENTS

Like Numbers (N = 22)

Principal's number	Consideration		Initiating structure	
	Before course	After course	Before course	After course
2	47	46	40	45
6	39	45	31	29
9	36	30	27	25
11	42	45	51	48
19	41	46	48	45
21	38	39	47	53
23	52	53	43	52
25	50	46	51	50
27	31	42	46	48
32	48	47	38	35
39	47	46	47	42
41	54	52	46	46
45	37	37	45	48
51	34	33	49	43
53	39	42	51	54
55	51	47	45	44
57	44	37	32	36
73	45	44	37	38
85	48	43	47	41
89	47	43	42	45
93	41	42	40	34
101	38	41	23	27

VII, in order that comparisons may be made, if so desired. The order is guarantee of anonymity given to principals at the outset of this study.

TABLE XII
COMPARISON OF EACH GROUP OF PRINCIPALS
AFTER THE TIME OF THE COURSE TO BEFORE THE COURSE
ACCORDING TO SUPERINTENDENTS' RESPONSES TO THE L.B.D.Q.

Group	Dimension	Signs*		Value of r to be signif- icant	Sign Test: are paired samples significantly different?
		+	-		
Course Candidates	Consideration	13	9	5	No
	Initiating structure	11	10	5	No
Like Numbers	Consideration	9	13	5	No
	Initiating structure	13	9	5	No

*See pages 49-51 for detailed explanation of the use of signs in the process of comparison, and the use of the Sign Test for Differences in Paired Samples as the test of significance in this situation.

structure; and they felt that the like number group had regressed slightly during this same time, in consideration, but had not changed during the same period in initiating structure.

Using the data of Table XI, the second comparison was then made, between the two groups, for each of the two dimensions, first comparing them before the course and then after it. The results of these procedures are shown in Table XIII.

From Table XIII it may be seen that there was no significant difference between the course candidate group and the like number group for either dimension before the course, or for initiating structure after the course. However, for consideration, after the course there was found to be a significant difference between the two groups: the course candidate group was found by superintendents to be significantly higher in consideration than were the like number group.

From Table XIII it may also be observed that, though not statistically significant, there were some slight differences: before the course superintendents saw the course candidates as slightly higher in consideration, but felt that, for initiating structure, the like number principals were generally a little higher; and after the course, the course candidate principals were more often given lower ratings than were their like numbers for initiating structure.

The third step of the initial plan to be used in the analysis of the data for each classification of respondent was then proceeded with. The ratio of signs of the course candidates was compared to the ratio of signs of the like number group for each of the two dimensions, using the

TABLE XIII
COMPARISON OF COURSE CANDIDATE PRINCIPALS
TO THEIR LIKE NUMBERS
ACCORDING TO SUPERINTENDENTS' RESPONSES TO THE L.B.D.Q.

Time	Dimension	Signs*		Value of r to be signif- icant	Sign Test: are paired samples significantly different?
		+	-		
Before the course	Consideration	13	9	5	No
	Initiating structure	7	14	5	No
After the course	Consideration	16	5	5	Yes
	Initiating structure	7	13	5	No

*See pages 49-51 for a more detailed explanation of the use of signs and the test of significance in this situation.

ratios obtained from Table XII. The resulting 2 x 2 tables, together with the test of the χ^2 , are presented in the first half of Table XIV. Also, from Table XIII, the ratio between the course candidate group and the like number group after the course was compared to the corresponding ratio before the course for each of the two dimensions. The 2 x 2 tables thus developed, together with the test of the χ^2 , are shown in the second half of Table XIV.

From the first half of Table XIV it was apparent that there was no significant difference between the degree of change within the course candidate group and the degree of change within the like number group, over the time of this study, for either dimension. However, for consideration, an observable difference did occur: from the comparison of the degree of change which occurred within each group, and confirmed by the comparison of the degree of difference between the groups after the course compared to the degree of difference between them before the course, superintendents appeared to feel that the course candidate group made greater improvement in consideration than did their like numbers. Very little change occurred in the course candidate group in initiating structure that did not also occur in the like number group during the time of this study.

From the second half of Table XIV it is apparent that there was no significant difference between the relative relationship between the two groups of principals after the course and the relative relationship between them before the course, either for consideration or for initiating structure. However, for consideration, as mentioned on the previous page, there was confirmation that the course candidate group had shown slightly greater

TABLE XIV

COMPARISON OF CHANGE WITHIN GROUPS AND BETWEEN GROUPS
ACCORDING TO SUPERINTENDENTS' RESPONSES TO THE L.B.D.Q.

Type of comparison	Consider- ation		χ^2*	Initiating structure		χ^2*
(Within groups)						
	+	-		+	-	
Course candidates after to before the course vs. Like numbers after to before the course	13	7	2.02	12	8	.63
	9	12		10	11	
(Between groups)						
Course candidates com- pared to like numbers before the course vs. Course candidates com- pared to like numbers after the course	13	9	1.43	7	14	.03
	16	5		7	13	

*In order to be significant at the .05 level of confidence it is necessary that $\chi^2 \geq 3.84$

increase than had the like number group of principals over the time of this study.

Recapitulation: The findings regarding the L.B.D.Q.-
Superintendents' Responses may be summarized as follows:

1. From Table XII:

- a) The course candidate principals were not significantly different in consideration, after the course, than they were before it, but they were observed to be more often rated higher after the course than they had been before it.
- b) The course candidate principals were not significantly different after the course than they were before it, in initiating structure, but they were observed to be slightly more often rated higher after the course than they were before it.
- c) The like number principals were not significantly different in consideration after the course than they were before it. Observation tended to confirm this, as there was little observable difference between the number of higher ratings given to members of each group.
- d) The like number principals were not significantly different in initiating structure after the course than they were before it. Moreover, no appreciable difference could be observed from the equality of the number of high ratings given to members of each group.

2. From Table XIII:

- a) Before the course no significant difference was found between the two groups of principals in consideration. Moreover, observation of the data also indicated no marked difference.
- b) Before the course no significant difference was found between the two groups of principals in initiating structure, but like number principals were observed to be more often rated higher for initiating structure.
- c) After the course a significant difference was found to exist between the two groups in consideration. The course candidate group was significantly higher than the like number group in consideration.
- d) After the course no significant difference was found between the two groups in initiating structure, but the course candidate principals were observed to be more often rated lower in initiating structure than were their like numbers.

3. From Table XIV:

- a) For consideration the degree of change within the course candidate group, during the time of this study, was not significantly different from the degree of change in the like number group. However, there was observed to be an appreciable degree of improvement within the course candidate group when contrasted with the degree of regression within the like number group.
- b) For initiating structure there was no significant

difference between the degree of change within the course candidate group and the degree of change within the like number group of principals. Moreover, there was no appreciable difference to be observed between the small amount of improvement in the course candidate group, after the course, and the very slightly greater amount of improvement in the like number group during the same time.

- c) For consideration there was no significant difference between the two groups of principals after the course as compared to their relative difference before it. By observation it was noted that, although the course candidate principals received more high ratings than did the like number principals before the course, the course candidate principals received a noticeably still higher number of high ratings after the course than did their like numbers. This trend was felt to reinforce that of 3 a) above.
- d) For initiating structure there was no significant difference between the two groups after the course as compared to before it. Moreover, by observation it was noted that the degree of slight superiority of the like number group before the course remained almost exactly the same as after it.

III. PRINCIPALS' RESPONSES ABOUT THEMSELVES

Each principal responded in the form of the Leader Behavior Description Questionnaire about his own leader behavior both before and after

the course. The data gathered from these responses are recorded in Table XV.

In order to interpret these data the plan of analysis shown on pages 46 and 48 was again followed, in the same sequence as it was in the analysis of the data gathered from each of the other two categories of respondents.

First, an investigation was made of change within each group of principals, for each of the two dimensions of the L.B.D.Q. The same procedure of the assignment of signs and the application of the Sign Test was used as before. The results of these procedures are recorded in Table XVI.

From Table XV it may be seen that in all four cases the sign values did not qualify at or below the maximum values in order to be significant at the .05 level of confidence. Therefore, no significant difference could be claimed within either group, after the course when compared to before the course, for either initiating structure or consideration. An inspection of Table XVI indicated the following: the course candidates felt themselves to be lower in consideration, after the course, but very little different in initiating structure; the like number group felt themselves to be slightly higher in both consideration and initiating structure after the course.

Next, the second comparison was made, in order to investigate change to be noted between the two groups. The same procedure was used as before for each of the former two categories of respondents. The results of these procedures are shown in Table XVII.

From Table XVII it may be seen that in all four cases the sign

TABL

THE LEADER BEHAVIOR DESC
ASCRIBED SCORES OF PRINC

Course Candidates (N = 22)

Principal's number	Consideration		Initiating structure	
	Before course	After course	Before course	After course
1	46	39	40	35
5	42	44	36	36
8	50	50	43	41
10	54	46	45	42
18	53	53	39	38
20	49	54	39	41
22	41	43	24	33
24	45	41	32	32
26	41	40	35	38
31	46	43	25	31
38	48	44	46	45
40	50	44	41	46
44	52	48	32	33
50	49	49	27	34
52	46	43	43	41
54	41	39	45	42
56	49	46	36	40
72	50	49	42	43
84	46	42	44	33
88	33	38	38	36
92	46	47	43	42
100	50	50	38	38

NOTE: The order of principals is the same as that used in Table completely different from that used in Table II, in order to preserve the

E XV

RIPTION QUESTIONNAIRE:
IPALS ABOUT THEMSELVES

Like Numbers (N = 22)

Principal's number	Consideration		Initiating structure	
	Before course	After course	Before course	After course
2	47	46	40	45
6	39	45	31	29
9	36	30	27	25
11	42	45	51	48
19	41	46	48	45
21	38	39	47	53
23	52	53	43	52
25	50	46	51	50
27	31	42	46	48
32	48	47	38	35
39	47	46	47	42
41	54	52	46	46
45	37	37	45	48
51	34	33	49	43
53	39	42	51	54
55	51	47	45	44
57	44	37	32	36
73	45	44	37	38
85	48	43	47	41
89	47	43	42	45
93	41	42	40	34
101	38	41	23	27

VII, in order that comparisons may be made, if so desired. The order is guarantee of anonymity given to principals at the outset of this study.

TABLE XVI

COMPARISON OF EACH GROUP OF PRINCIPALS
AFTER THE TIME OF THE COURSE TO BEFORE THE COURSE
ACCORDING TO PRINCIPALS' RESPONSES TO THE L.B.D.Q.

Group	Dimension	Signs*		Value of r to be signif- icant	Sign Test: are paired samples significantly different?
		+	-		
Course candidates	Consideration	5	13	4	No
	Initiating structure	9	10	4	No
Like numbers	Consideration	12	8	5	No
	Initiating structure	12	7	5	No

*See pages 49-51 for a more detailed explanation of the use of signs and the test of significance in this situation.

TABLE XVII
COMPARISON OF COURSE CANDIDATE PRINCIPALS
TO THEIR LIKE NUMBERS
ACCORDING TO PRINCIPALS' RESPONSES TO THE L.B.D.Q.

Time	Dimension	Signs*		Value of r to be signif- icant	Sign Test: are paired samples significantly different?
		+	-		
Before the course	Consideration	12	6	4	No
	Initiating structure	11	9	5	No
After the course	Consideration	12	9	5	No
	Initiating structure	9	12	5	No

*See pages 49-51 for a more detailed explanation of the use of signs and the test of significance in this situation.

values did not qualify at or below the maximum values for significance at the .05 level of confidence. Therefore, no claim could be made that there was a significant difference between the two groups of principals, either before or after the course, for either consideration or initiating structure. However, an inspection of Table XVII revealed the following: before the course the course candidates more often rated themselves higher than did their respective like numbers, in consideration, but both groups rated themselves about equal in initiating structure; after the course the course candidate principals rated themselves very much as did their corresponding like numbers in both consideration and initiating structure.

The final step in the analysis of the principals' evaluation of their own leader behavior was the process of comparison of the degree of change within the course candidate group to the degree of change within the like number group, for each of the two dimensions of leader behavior. For this the data of Table XVI were used. The results of these comparisons between the two groups after the course compared to the relationship before the course are shown in the first half of Table XVIII on the next page. Then, a comparison was made between the degree of difference which existed between the two groups after the course and the degree of difference which existed between them before it, for both dimensions, using the ratios to be found in Table XVII. The results of these comparisons are presented in the second half of Table XVIII.

From Table XVIII it may be noted that there was a significant difference between the degree to which the course candidate group of principals rated themselves as lower in consideration after the course and the

TABLE XVIII

COMPARISON OF CHANGE WITHIN GROUPS AND BETWEEN GROUPS
ACCORDING TO PRINCIPALS' RESPONSES TO THE L.B.D.Q.

Type of comparison	Consider- ation	χ^2_*	Initiating structure	χ^2_*
(Within groups)				
	+	-	+	-
Course candidates after to before the course vs.	5	13	9	10
Like numbers after to before the course	12	8	12	7
		3.98		.96
(Between groups)				
Course candidates com- pared to like numbers before the course vs.	12	6	11	9
Course candidates com- pared to like numbers after the course	12	9	9	12
		.37		.60

*In order to be significant at the .05 level of confidence it is necessary that $\chi^2 \geq 3.84$

degree to which the like number principals rated themselves higher in consideration at the same time. No significant difference was found in the degree of change which took place in the course candidate group and the degree of change which took place in the like number group, in initiating structure, during the time of this study. Also, no significant difference was found in the relationship which existed between the two groups of principals after the course when compared to the relationship which existed before it, for either consideration or initiating structure. Inspection of the actual differences which did occur tended to confirm these findings.

Recapitulation: The findings regarding the L.B.D.Q.-Principals' Responses may be summarized as follows:

1. From Table XVI:

- a) The course candidate principals were not significantly different in consideration after the course than they were before it. However, by inspection it was observed that the course candidate group felt that they were lower in consideration after the course than they were before it.
- b) The course candidate principals were not significantly different in initiating structure after the course than they were before it. By observation they were almost identical after the course to what they were before it, in initiating structure.
- c) The like number principals were not significantly different in consideration after the time of the course than they were before it, but, by actual observation it was noted

that they did tend to consider themselves higher in consideration after the course than they did before it.

- d) The like number principals were not significantly different in initiating structure after the time of the course from what they were before it, but they were observed to rate themselves higher slightly more often after the course than before it.

2. From Table XVII:

- a) Before the course no significant difference was found between the two groups of principals in consideration. However, there was observed to be a predominance of higher ratings for course candidates.
- b) Before the course no significant difference was found between the two groups of principals in initiating structure. Moreover, observation of actual differences indicated that there was almost no difference in the way each group saw itself.
- c) After the course no significant difference was found between the two groups of principals in consideration. Moreover, the actual ratings tended almost exactly to confirm this.
- d) After the course no significant difference was found between the two groups of principals in initiating structure, and observed differences were also very slight.

3. From Table XVIII:

- a) For consideration, the degree of change within the course

candidate group was significantly different from the degree of change within the like number group. By comparison with their like numbers the course candidates were significantly lower in consideration.

- b) For initiating structure, there was no significant difference between the degree of change within either group of principals, which was confirmed by observation of the actual ratios of difference.
- c) For consideration there was no significant difference between the relationship between the two groups after the course and the relationship which existed between the two groups before it. Observation of the actual ratios of differences tended to confirm this finding.
- d) For initiating structure, there was no significant difference between the groups of principals after the course, compared to the difference which existed before it, and observation of actual ratios confirmed this finding.

CHAPTER V

SUMMARY, CONCLUSIONS, IMPLICATIONS, AND RECOMMENDATIONS

I. SUMMARY

This study of the effect upon leadership of the Leadership Course for School Principals, 1958, dealt specifically with the description and evaluation of changes in behavior noted to have taken place at the school level, on the job, a year after the course, as compared to observed behavior as it took place just before the time of the course. The leaders involved in the study were matched pairs of school principals. One of each pair, called a course candidate, participated in the Leadership Course for School Principals, 1958; the other of each matched pair, called a like number, had not attended such a course up to the end of this study. Leadership, for the purposes of this study, was defined as the unqualified, full range of behavior of an appointed leader in the performance of his duties. Thus, the consistent past difficulties of definition of leadership in such a way as to have definite, measurable variables were avoided in favor of the measurement of actual items of leader behavior of a leader in interaction with his group as they worked together towards mutually recognized goals. Measurement was done by actual participants in an interacting group, and by a close observer whose observation was at the actual school level, by response to the Leader Behavior Description Questionnaire⁵. This instrument, conceived by an interdisciplinary group of scholars, and refined

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by extensive and detailed item analysis, measured leader behavior in two dimensions, or two general categories of items of behavior, found by analysis to be applicable to a wide range of organized leadership situations. These two scales, purporting to be sufficiently independent to permit their use as measures of different kinds of behavior (11, p. 51), were consideration and initiating structure. Consideration was conceived to be "behavior indicative of friendship, mutual trust, and warmth in the relationship between the leader and members of his group," (5, p. 2); and initiating structure was recognized to be the delineation and maintenance of channels of communication between the leader and the members of his group in the process of getting the job done.

The L.B.D.Q. was administered by mail just before the Leadership Course, and a year after it, to three groups of observers of the principals' behavior on the job: teachers, superintendents, and the principals themselves. The purpose of the study was explained, and clear instructions were given that the responses to items of the questionnaire were to describe what was the actual situation at that time, but no mention was made of dimensions.

The raw data of this study consisted of the responses to 816 questionnaires, divided into two sets: 418 administered just before the Leadership Course, and 398 completed approximately a year after it. The teachers' descriptions, both before and after the course, were obtained by inviting each member of each principal's staff (up to twelve) to complete a questionnaire. The questionnaires, provided there were four or more, were scored for consideration and initiating structure, and the mean of the scores for each dimension was computed for each principal. The

superintendents' descriptions, both before and after the course, were obtained by direct responses of one superintendent (the same superintendent before and after the course) about each principal involved, and were scored for consideration and initiating structure. The principals' self-evaluations were obtained by the direct response of the principals themselves to the same instrument. All respondents to the L.B.D.Q. were requested to describe actual behavior as it was observed at the time that the L.B.D.Q. was administered.

By these procedures six paired sets of data were obtained. For each of the two groups of twenty-two principals (one group attended the Leadership Course for School Principals, 1958, and the other, paired group, which acted as the control, did not) there were the following scores:

1. L.B.D.Q.-Actual, Teachers' Descriptions--Consideration.
2. L.B.D.Q.-Actual, Teachers' Descriptions--Initiating Structure.
3. L.B.D.Q.-Actual, Superintendents' Descriptions--Consideration.
4. L.B.D.Q.-Actual, Superintendents' Descriptions--Initiating Structure.
5. L.B.D.Q.-Actual, Principals' Self-Descriptions--Consideration.
6. L.B.D.Q.-Actual, Principals' Self-Descriptions--Initiating Structure.

From these data four sets of comparisons were derived, which were relevant to the consideration of change in those who attended the Leadership Course for School Principals, 1958. These four sets of comparisons, which were subjected both to statistical analysis and to inspection for trends, were:

1. change within the course candidate group, by means of comparison of leader behavior after the course with leader behavior before it;
2. comparison of the degree of change within the course candidate group during the time of this study with the degree of change within the like number group during the same period;
3. difference between the course candidate group and the like number group after the course; and
4. comparison of the degree of difference between the two groups of principals after the course to the degree of difference between the two groups which existed before the course.

Following this pattern of comparisons just described, the findings of these investigations of change were, in summary:

1. (a) For consideration, no significant difference was found within the group of course candidate principals after the course as compared to before it. It was observed, however, that teachers and superintendents tended to consider these principals to be higher in consideration after the course, but that the principals themselves quite firmly reversed this tendency.
- (b) For initiating structure, no significant difference was found within the course candidate group after the course as compared to before it. It was observed, however, that only superintendents, of the three groups who rated the principals, felt that the course candidates were higher

in initiating structure after the course; the teachers, and the principals themselves, saw no difference.

2. (a) For consideration, by comparison with how the like number principals saw themselves, the course candidates rated themselves significantly lower in consideration after the course than they had been before it. No other significant differences were found. However, the evaluations of both teachers and superintendents tended to contradict this finding, in that both these groups of respondents described the course candidate principals as more often higher than they did the like number principals, in consideration, after the course than before it.
- (b) For initiating structure, no significant difference was found between the degree of change which occurred within the course candidate group and the degree of change which occurred within the control group. Moreover, by observation, all three sets of respondents were found to agree that the degree of change was almost identical, and almost nil.
3. (a) For consideration, superintendents were noted to have indicated that the course candidate group of principals was significantly higher than their like numbers, after the course. Teachers were observed to consider that there was no appreciable difference between the two groups after the course, whereas the principals themselves were found

to have considered that the course candidate group was slightly higher in consideration after the course than was the like number group.

- (b) For initiating structure, no significant difference was found between the two groups after the course. All three groups of ratings, however, by observation, tended to consider that more of the like number principals were higher in initiating structure than were their paired like numbers, after the course.
- 4. (a) For consideration, no significant difference was found between the relationship between the two groups after the course and the relationship between them before it. Moreover, only superintendents were observed to feel that there was a slight trend in favor of the course candidate group; teachers and the principals themselves were observed to assign almost the same relationship between the two groups after the course as they did before it.
- (b) For initiating structure no significant difference was found between the relationship between the two groups after the course, and the relationship between the two groups before it. Moreover, all three groups of respondents tended to agree, by their actual ratings, that there was almost no difference between these relationships in either of the two groups of principals.

II. CONCLUSIONS

The findings of this study produced two instances of significant differences which indicated significant changes in the dimension of consideration in those who attended the Leadership Course for School Principals, 1958:

1. The group of principals which had attended the course was significantly higher in consideration, as rated by their superintendents, than it had been before the course.
2. The group of principals which had attended the course was significantly lower in consideration, after the course as compared to before it, as rated by themselves, when compared to the corresponding self-ratings of the like number group.

In the findings of this study certain tendencies regarding consideration were noted by inspection of the actual differences in the scores ascribed by the three categories of respondents:

1. Teachers' responses indicated, about consideration: that course candidates were slightly higher after the course than they had been before it, and that this degree of change which had occurred within the course candidate group was slightly greater than the degree of change which had occurred within the like number control group over the same period of time; but that the degree of difference between the two groups after the course was very much the same as it had been before the course.
2. Superintendents' responses showed, regarding consideration:

that course candidates were slightly higher after the course than they had been before it, and that this degree of superiority was greater than the degree of change which had occurred in the like number group; and that, although the course candidate group was significantly higher than the like number group after the course, this difference between the two groups after the course was also much greater than the difference which had existed before the course.

3. Principals' self-ratings indicated, regarding consideration, that the course candidate group was much lower after the course than it had been before it.

These observations of trends by the inspection of actual scores provided strong support for the two significant differences which indicated the significant changes in consideration which had occurred in the leader behavior of the group of principals which had participated in the Leadership Course. There was found to be very high agreement among the descriptions of all of the three categories of respondents to support the significant findings of this study, regarding consideration.

The findings of this study indicated that there were no significant differences indicative of significant changes in the dimension of initiating structure in those principals studied, who had participated in the Leadership Course for School Principals, 1958.

In the findings of this study certain tendencies regarding initiating structure were noted by inspection of actual differences which occurred in the scores ascribed by the three categories of respondents:

1. Teachers' responses indicated, about initiating structure: that there had been almost no change within the course candidate group over the period of this study, and that the degree of change within the group of principals which attended the course was much the same as that which had occurred within the control group; and that the difference between the group of principals which attended the course and the control group, over the period of this study, was almost identical.
2. Superintendents' responses showed, about initiating structure: that there had been a slight improvement in the course candidate group, after the course as compared to before it, whereas there had been almost no change, during the same time, within the like number group, and that the difference between the two degrees of change within the two groups had been negligible; and that the course candidate group was lower than the control group, after the course, but that this relationship was substantially the same as that which had existed before the course.
3. Principals' self-ratings indicated, regarding initiating structure: that there was little difference between the course candidate group and the control group after the course, whereas there had been a slight superiority on the part of the course candidate group before it, but that the degree of change within these two groups of principals was very little different; and that, whereas there had been little difference

between the two groups before the course, and a very slight superiority on the part of the course candidate group after it, the degree of change in these differences was negligible.

This lack of trends of change observed by inspection of actual scores tended to provide meaning to the absence of significant differences indicative of significant changes in initiating structure. They tended to confirm that no significant change had occurred in initiating structure in the group of principals which had attended the course.

Therefore, it was concluded:

1. that superintendents saw a significant increase in consideration, which teachers tended to confirm, in principals after they had participated in the Leadership Course for School Principals, 1958;
2. that these same principals saw themselves to be significantly lower in consideration after participation in the Leadership Course for School Principals, 1958; and
3. that no significant or inferred change in initiating structure had been observed in the leader behavior of principals who attended the Leadership Course for School Principals, 1958, by teachers or superintendents, or by the principals themselves.

III. IMPLICATIONS

In essence, the conclusions of this study were: that the principals, after participation in the Leadership Course for School Principals, 1958, were recognized by their superintendents, and to some degree by their teachers, to be higher in consideration; that, at the same time, these

principals rated themselves lower in consideration after the course; and that no change in initiating structure had been found in the participants after the course.

In order to contemplate the implications of these conclusions it is necessary to review, briefly, the nature and structure of the Leadership Course for School Principals, 1958, dealt with in some detail in Chapter I. The formal time-allotment of the course was, approximately: thirty-five percent of the time listening to, and discussing papers presented by selected specialists; fifty-five percent of the time in discussion groups dealing with self-selected matters of common interest, and in reporting to others the findings of these groups; and ten percent of the time working individually on plans for a project to be implemented "back home". Added to this, by the very nature of the living arrangements, was a great deal of free-time shop-talk: a dormitory system, combined with a location away from external social opportunities, threw participants together into an almost round-the-clock association; and encouragement was given to special consultation and extra work in the development of each individual's planning of a project to be carried out "back home". Thus, it is apparent that the learning situations were largely group oriented.

Also in order to contemplate the implications of the conclusions of this study it is necessary to review briefly the known background of the participants, dealt with in detail in Table II. As summarized earlier, in Chapter III:

The average course candidate of this study was a man (only one woman was included), who was principal of a staff of thirteen teachers, was free from teaching six hours a week, had no

clerical assistance (only four of twenty-two had), had taught for sixteen years, had been an administrator for nine years, had been in his present position for five years, and held one degree.

Thus it may be readily noted that the majority of principals whose leader behavior was studied here were "old hands", whose reaction to the experiences of the course, while at the course, might be expected to be sensitive to the practical situations which they had known, and must return to, "back home".

Let us now return to the apparent paradox presented by the first two conclusions of this study: that after the course the principals were recognized by others to have increased in consideration; and that, at the same time, they saw themselves as lower in this dimension of leader behavior. It has been submitted that the attention of the principals during the course was very probably strongly focussed upon the human relations elements whereby they could motivate those who should, but might not, co-operate with them in the accomplishment of desired goals. It has also been submitted that the principals studied were "old hands" in the practical affairs of the principalship, so that it seems altogether probable that such long experience would give strong impact to this felt need, in that they would be expected often to have faced the problems of how to motivate group action in practical situations. Therefore, it was hypothesized that these principals gained new insight, and a new humility, with regard to consideration in their leader behavior. This would then resolve this apparent paradox, and imply that these two conclusions were facets of one effect of the course upon the principals. The insight into the elements of motivation of co-operation in getting "the job" done is

then ratified by the significant improvement in consideration noted by others working closely with the principals in their schools. At the same time the personal effect upon the principals (their new humility) resulting from this insight coincides with their self-evaluation of being lower in consideration after the course. Thus, from this point of view, the conclusions regarding consideration would seem to imply that the course had the extrinsic effect of causing principals to increase in consideration, and the intrinsic effect, at the same time, of causing them to recognize their inadequacies against the depth of their insight, and therefore to rate themselves lower in consideration.

The third conclusion of this study was that no significant or inferred change in initiating structure had been found in the leader behavior of the principals who had participated in the course. This was directly contrary to the findings of the only other study noted, and reported in Chapter II which dealt with the effects of a leadership training course. Also, the statement of Halpin (6, p. 81) probably summarizes the popular expectation in this regard, and lends a note of concern to this conclusion:

"Where the initiation of structure is weak, however, it is doubtful that there exists sufficient leadership--whether democratic or non-democratic--to be dignified by the name. Democratic leadership is highly desirable; but for a leader's behavior to earn this description, it is not sufficient for the leader to be democratic--he must also demonstrate definite acts of leadership."

In a more recent study Keeler (8, pp. 126-127) reported even more pointedly:

"All of the statistics give strong support to the hypothesis that leader behavior of the principal of a school.....is

significantly related to productivity of the school....."

With regard to this effect upon productivity he added:

"There is some evidence to indicate that the relationship of the Initiating Structure dimension is greater than that of the Consideration dimension....."

Even more recently, Greenfield (3, p. 115) supported the same contention when he found:

"Consideration as a dimension of leadership is significantly related to (student) growth but the extent of this relationship is smaller than that shown by Initiating Structure."

In the face of these findings from other studies, it seems desirable that the implications of this study's conclusion regarding initiating structure be contemplated carefully.

No significant difference in initiating structure was found in the leader behavior of the sample of principals who attended the Leadership Course. It is now necessary to consider the possibilities of rejecting this hypothesis. In so doing such arguments as the following might be advanced:

1. It might be contended that the dimension of initiating structure was insensitive to an actual effect of the course more in line with its objectives. As was pointed out earlier in this section, plans for projects "back home" were made by participants as part of their course work. As a consultant to one of the discussion groups of this course the writer can vouch for the fact that every member of this group made such a plan, and handed the consultant a copy of it as was required by the course instructions, that several of the participants carried on a correspondence regarding the development of some of these

projects, and that several superintendents commented to the writer in the year after the course on the effectiveness of some of the projects. It may also be pointed out that lengthy printed reports of the findings of each of the discussion groups indicated the great extent to which "the job" of the principal and his staff was discussed. The participants took these printed copies home with them in an organized book, presumably for further reference. Also, approximately an eighth of the time of the course was given to sharing findings between groups. An earlier hypothesis with regard to the concern for the dimension of consideration was predicated upon the recognition of the amount of attention given to the structure of the job which should be done in the schools. Therefore, it would probably be expected that the principals would have initiated many actions when they returned to their schools after the course. On the other hand, by definition, initiating structure as a dimension of leader behavior incorporated into the L.B.D.Q. was said to be "the delineation of channels of communication between the leader and the members of his group in their interaction in working towards a shared goal....." Therefore there is a probable difference between initiating action such as was discussed extensively during the course by its participants and initiating structure as defined to be part of the instrument used in its evaluation. However, in practice, the dimension of initiating structure has been shown

to be sensitive to, and inclusive of, achievement of goals. Keeler (8, p. 128) found that there was a high and direct relationship between a high rating of the principal in initiating structure and the productivity of the school. So also did Greenfield (3, pp. 114-115). An inspection of the items of the initiating structure scale⁶ of the L.B.D.Q. also indicates a concern for accomplishment of goals, and not alone the patterning of channels of communication (vide items 4, 9, 14, and 16). Therefore there seems to be little genuine support for the possible inference that much job-accomplishment was learned and put into practice but that the initiating structure scale was insensitive to goal-achievement, for the instrument has proved a sensitivity to job-accomplishment in principals' leader behavior.

2. Another contention, in similar vein, might be that the instrument was too rough to measure an actual change in initiating structure. For instance, at least seven of the items in this scale might be contended to be of doubtful applicability to the established practice of a principal's work in many of the school systems from which those who were studied came. Item 7 ("He rules with an iron hand") through its use of "iron hand" seems to have an unfortunate connotation from which principals might be expected to shy away. Also, such items as the

⁶The items of this scale are shown on pp. 19-20.

following may be contended to be unlikely, and, to some, even improper practices of principals in regard to their teachers:

- 9. He criticizes poor work.
- 16. He schedules the work to be done.
- 17. He maintains definite standards of performance.
- 22. He emphasizes the meeting of deadlines.
- 35. He sees to it that group members are working up to capacity.

To this might be added item 24 ("He encourages the use of uniform procedures") as largely inapplicable to the school situation at the staff level. Thus, up to seven of the fifteen items do possibly seem to have some degree of weakness in the principal-staff relationship. The L.B.D.Q. was conceived as a general instrument, not specifically developed to take into account the specific mores and sensitivities of a particular discipline. However, recent research again points out quite firmly that the initiating structure scale measures effectively in the school situation. For example, Keeler (8, p. 126-127) found that the dimension of initiating structure was even more highly related to school achievement than was consideration, although both were significantly related. Greenfield (3, p. 114-115) agreed:

"Initiating structure as a dimension of leadership is related to pupil growth."

Moreover, he concluded at the same time, from his study, regarding the use of the L.B.D.Q.:

"There is a significant agreement among principals, other teachers, and students in their descriptions....."

In some respects both Keeler and Greenfield seemed to find that the initiating structure scale was better than the consideration scale as a predictor of leader effectiveness.

Although none of the above-mentioned research compared the same sample at two different times, it seems unlikely that the instrument can be discredited in the face of such successes with its use. There seems to be no sound reason to consider the measure of initiating structure ineffective.

3. It might also be contended that "the organization" militated against change in initiating structure. In this regard Halpin (4, p. 29) indicated a point worth considering:

".....it is important that we do not overlook the responsibility imposed upon official leaders by the institutional realities of the formal organization of which he is a part. The official leader has a responsibility, and, in fact, a contractual obligation to accomplish a specified mission, and certain aspects of this mission may be beyond the purview of decision by the immediate work group."

The school systems from which these principals were drawn were recognized by the experience of the writer to have their own expectations and internal hierarchical structure, largely similar and quite firmly established, despite their being spread over a large area. Such influences as the following might be said to militate against the restructuring of a principal's leader behavior of initiating structure: the common hegemony of Principals' Associations in the

co-ordination and structuring of the work of principals in administration and in-service education; the common primacy of the superintendent, or the supervisor of instruction to designate or be the chief instigator of school projects; the systemic expectation and acceptance by teachers of these influences upon their goals in the educational effort, whereby it is possible that they may see the initiative, if not the action, in others beyond the principal; and the small size of the average principal's school (thirteen teachers) wherein Table II shows that he was almost fully occupied as a teacher with little time for "working together towards shared goals." Chorney (1, p. 18) seems to have summed up this situation, probably as a result of his experience in practical situations of this type when he said:

"For instance, they discovered that principals talked of their function of leadership, yet that many of them concerned themselves with administrative routine only."

Although there may well be some truth in this contention, it should not be forgotten that the several studies recently quoted were carried out in this same environmental climate. Their success, using the L.B.D.Q., does not encourage high credence in this form of apologetics.

Actually there seems to be little reason to interpret the conclusion of this study regarding initiating structure as other than that it is most unlikely that a change did occur. The findings of this study support this interpretation: at the outset no significant difference was

found between the group of principals who were to attend the Leadership Course and the group which served as the control; after the course no significant difference was found to exist between the two groups of principals or between the course candidate group after the course as compared to before it; moreover, the actual ratings made by the three sets of respondents indicated that there was almost no difference between the two groups of principals after the course, or between the course candidate group after the course as compared to before it. On both logical grounds, and for statistical reasons, the most likely interpretation is that no change did occur in initiating structure behavior in the participants in the Leadership Course for School Principals, 1958.

It is now relevant to turn to the implications of this interpretation of the third conclusion of this study. As it is highly unlikely that a change occurred in the principals' leader behavior of initiating structure, and in view of the demonstrated importance of facility in this dimension of leader behavior, what implications does this have regarding the course itself?

There are two possible implications which seem to be tenable:

1. The period of the course was two weeks. This, in itself, may partly explain why no change in initiating structure occurred. The "average" principal was shown to have been an "old hand" both in the business of teaching and in the office of an official, appointed leader. Therefore it is conceivable that the established habits of time must be set against the brevity of the course. Change was found to have occurred in

consideration. The presence of one type of change enhances the limitations, in a two-week period, of the expectation of a full development of a second major area of change.

2. The type of course may not have been conducive to the learning of initiating structure behavior. Miles and Passow (7, pp. 141-142) present a theory of the concepts of training in a dynamic, group situation, which seems particularly pertinent:

- a) There must be a focus of concern which brings intention into consonance with purpose.
- b) There must be an involvement in learning, integrating cognitive, affective and motoric elements rather than primarily academic or verbal-intellectual elements.
- c) There must be the opportunity for repeated performance, with explicit, immediate feedback of the results.
- d) There must be safe experimentation in a situation of at least partial irreality where the normal consequences of failure do not ensue.

As was pointed out earlier, the major part of the time of the course was given to discussion of self-selected topics. This part of the course provided the major opportunity for doing, but its permissive structure left the articulation of its actual involvement to the individual. The purposes of the course were clearly stated, but the focus of concern--the bringing of "intention into consonance with purpose"--seems clearly to have resulted, in practice, in focusing upon consideration and not upon initiating structure, regardless of the stated objectives. Then, the very nature of discussion leaves the degree of involvement up to the individual: the

degree of empathy and the recourse to vicarious experience did, apparently, serve consideration effectively, but did not promote the learning of initiating structure behavior. In two weeks it may well be that the learning of initiating structure behavior may have been too difficult to accomplish, since it more likely emanates from action rather than from an attitude or frame of mind. Or, involvement with consideration may have crowded out involvement with initiating structure behavior, for a focus upon one involvement would tend to dominate the learning from a given instance of attention. Third, the opportunity for repeated performance seems to be less likely to be associated with a long list of academically presented items which compose "the job" to the satisfaction of a range of members of a group, than to be associated with the elements of consideration which are significant to each individual in the discussion of "the job", since the latter are each personally involving and the former are not always so. In the same concept of training (the third), the feedback of matters of consideration would similarly be more constantly individually applicable than would the diverse range of the elements of job-orientation, since the former would be individually significant, and the latter would, in many cases, be primarily academic and in only a limited number of cases would they be of vital personal interest and significance. In the light of the fourth concept, the intrinsic and personal

contemplation of the individual participant's conception of consideration would consistently be "safe experimentation", for it would be seldom voiced. The discussion of elements of job-orientation brought forth many clashes, in the recollection of the writer of the functioning of the group he attended, from a few who may have felt uneasy or threatened in the action recommended, whereas many at each of these instances were passive, as the situation was apparently not particularly relevant to them. In this concept, experimentation in initiation of structure, even vicariously, was felt to be limited to only a part of the group at each instance of discussion. It is also felt that much the same comments could be made regarding the learning situations involved in the speeches given by specialists to the assembled members of the course, in which case about eighty percent of the time of the course would be involved. In summary, it is felt that the type and nature of the course, and particularly the workings of the discussion groups, provided incentive to the development of consideration, and tended to provide little actual training in initiating structure behavior.

The implications derived from the conclusions of this study, then, were:

1. Those principals who attended the Leadership Course for School Principals, 1958, were affected by its influence in consideration. This influence showed itself in two ways: it

apparently engendered in these principals the intrinsic realization of a new humility regarding their human relations approach to their teaching staffs; but it had the extrinsic effect, at the same time of causing an observable increase in their consideration in their relationship between themselves and the members of their teaching staffs.

2. Those leaders who participated in the Leadership Course for School Principals, 1958, were, in all probability, not affected by its influence upon their leader behavior in the dimension of initiating structure.
3. The Leadership Course for School Principals, 1958, having contributed more to growth in the dimension of consideration than to increased skill in the dimension of initiating structure in the leader behavior of its participants may have been at least partially caused by the brevity of the course and/or the nature of the course.

RECOMMENDATIONS

The conclusions of this study have provided further encouragement to the continuation of the series of leadership courses for Alberta school principals, in so far as the Leadership Course for School Principals, 1958, is typical of them. The conclusions regarding an increase having occurred in consideration as part of leader behavior, as found by this study, indicate a worthwhile accomplishment to the credit of this course, and probably to this type of course.

At the same time, the strong likelihood that this course, and

probably this type of course, induced no change in goal-oriented skills in the leader behavior of its participants is a matter of concern which calls for attention. The amount of research which indicates that the dimension of initiating structure in leader behavior has a high, direct relationship with the productivity of the school, and which also indicates that this dimension is probably a better predictor of leader effectiveness than is the consideration scale, indicates a need to try to overcome this inadequacy in this type of course. Intuitively, at least, the unstructured-discussion type of organization seems to be suspect in the development of an increase in goal-oriented skills. Miles and Passow's principles (7, pp. 141-142) regarding training in a dynamic group situation (structure of actual focus, individual involvement, repetition with feedback, and safe experimentation) seem to indicate a need for some form of structuring the content, with some form of enforced decision, and discussion of the result with attention to the desirability of the effect. Such approaches as role-played situations, taped or filmed situations, or a provocative oral "stage setting" come to mind as possible trainer-situations. Also, the brevity of the time involved in this course may be suspect for its effect upon results. Possibly there is need for experimentation with the effect of different time lengths, or with the splitting of the course into two or more parts, each of which to employ a different set of training techniques or focuses upon different behavior skills. The nuance of this recommendation is that planned experimentation to accomplish growth in a broader range of specific, desirable, and obtainable objectives should take place, particularly with a view to increasing skill in goal-oriented leader behavior, while at the

same time preserving and improving such facility in the promotion of growth in the human-relations aspects of leader behavior as present techniques have developed.

As a natural outgrowth of this recommendation, it is desirable that there be periodic evaluation associated with the continuing evolution of these courses. This study has indicated both strengths and weaknesses in the Leadership Course for School Principals, 1958, and in so doing may have provided some insight into courses of this type. In so doing, it is hoped, there may be some effect upon future courses in some form of restructure that appears to be the best available likely means of improving their training power. Such change, however, should change the effect of the courses. The sequence of change and re-evaluation seems to go hand in hand towards improvement of what is widely recognized as a very valuable in-service program for the improvement of the efficiency of schools.

In this regard, should some form of replication be contemplated at some future time, two problem-areas in the design of this study should in some way be improved or circumvented:

1. The effect of the summer holiday period of the school system upon the stability of the samples of principals being studied affected adversely the size and parametric nature of the samples involved.
2. The year-apart test-retest system which was used tended to postpone the development of findings and conclusions beyond the time of their greatest usefulness.

These two conditions are conceived to be a repetitive hindrance in any

replication, unless they can be avoided or minimized. In looking back, at least three alternatives might possibly have reduced the exodus of prospective members of the samples used in this study: the superintendents might have been able to choose, if asked, a greater number of course candidates and like numbers who were expected to remain in the same job; course candidates and like numbers could have been followed by the study to their new locations, provided these were in the same administrative areas, probably with little adverse effect upon the study; or the nomination of course candidates might have been completed at an earlier date, to the exclusion of the number of alternate candidates who turned up for the course either unannounced or announced so late that the pre-course data gathering system was impossible to complete. The problem posed by the before-after test-retest design used in this study seems to pose a greater challenge. Lacking pre-course norms of leader behavior, there seems to be no possible way of eliminating some form of pre-course investigation; and shortening the post-course investigation to much less than a year after the course seems likely to eliminate a full opportunity for the effects of the course to show themselves. However, one shortening effect would probably be the use of some electronic data-processing system; it is also possible that the L.B.D.Q. could be set up for electrographic marking. In essence, the procedures used in periodic evaluations should be streamlined as far as is commensurate with maximum effectiveness, and certainly reduced from what, at the moment, appears to be a long-drawn-out process.

With regard to evaluation, the further use of the L.B.D.Q. seems to be desirable. The use of other frames of reference than the interaction

approach to the study of leadership may also be worth while. For instance, the development of criteria and the use of some form of self-evaluation technique, particularly in view of the need for control of focus and the intrinsic involvement of participants, might be rewarding. The results of other research in the field of leader behavior may have applications regarding techniques suitable to this purpose, such as studies done by Greenfield (3), and Miklos (10). At the time that this study was designed the L.B.D.Q. appeared to be the most likely instrument to use in this type of evaluation; since then other research has been done, and should also be taken into account in any future plans for evaluation of leadership courses. These courses afford numerous possibilities for the study of leadership styles, and of methods by which they may be influenced and improved. The leader behavior-in-interaction framework of evaluation has by no means been explored to the full. Nor have other approaches.

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APPENDIX "A"

- - -

LEADER BEHAVIOR DESCRIPTION
QUESTIONNAIRE

LEADER BEHAVIOR DESCRIPTION QUESTIONNAIRE

Developed by staff members of
The Ohio State Leadership Studies

Name of Leader Being Described.....

Name of Group Which He Leads.....

Your Name.....

On the following pages is a list of items that may be used to describe the behavior of your supervisor. Each item describes a specific kind of behavior, but does not ask you to judge whether the behavior is desirable or undesirable. This is not a test of ability. It simply asks you to describe, as accurately as you can, the behavior of your supervisor.

Note: The term, "*group*," as employed in the following items, refers to a department, division, or other unit of organization which is supervised by the person being described.

The term "*members*," refers to all the people in the unit of organization which is supervised by the person being described.

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College of Commerce and Administration
The Ohio State University
Columbus, Ohio

DIRECTIONS:

- a. READ each item carefully.
- b. THINK about how frequently the leader engages in the behavior described by the item.
- c. DECIDE whether he always, often, occasionally, seldom or never acts as described by the item.
- d. DRAW A CIRCLE around one of the five letters following the item to show the answer you have selected.

A=Always

B=Often

C=Occasionally

D=Seldom

E=Never

- | | | | | | |
|---|---|---|---|---|---|
| 1. He does personal favors for group members. | A | B | C | D | E |
| 2. He makes his attitudes clear to the group. | A | B | C | D | E |
| 3. He does little things to make it pleasant to be a member of the group. | A | B | C | D | E |
| 4. He tries out his new ideas with the group. | A | B | C | D | E |
| 5. He acts as the real leader of the group. | A | B | C | D | E |
| 6. He is easy to understand. | A | B | C | D | E |
| 7. He rules with an iron hand. | A | B | C | D | E |
| 8. He finds time to listen to group members. | A | B | C | D | E |
| 9. He criticizes poor work. | A | B | C | D | E |
| 10. He gives advance notice of changes. | A | B | C | D | E |
| 11. He speaks in a manner not to be questioned. | A | B | C | D | E |
| 12. He keeps to himself. | A | B | C | D | E |
| 13. He looks out for the personal welfare of individual group members. | A | B | C | D | E |
| 14. He assigns group members to particular tasks. | A | B | C | D | E |
| 15. He is the spokesman of the group. | A | B | C | D | E |
| 16. He schedules the work to be done. | A | B | C | D | E |
| 17. He maintains definite standards of performance. | A | B | C | D | E |
| 18. He refuses to explain his actions. | A | B | C | D | E |

19. He keeps the group informed.	A	B	C	D	E
20. He acts without consulting the group.	A	B	C	D	E
21. He backs up the members in their actions.	A	B	C	D	E
22. He emphasizes the meeting of deadlines.	A	B	C	D	E
23. He treats all group members as his equals.	A	B	C	D	E
24. He encourages the use of uniform procedures.	A	B	C	D	E
25. He gets what he asks for from his superiors.	A	B	C	D	E
26. He is willing to make changes.	A	B	C	D	E
27. He makes sure that his part in the organization is understood by group members.	A	B	C	D	E
28. He is friendly and approachable.	A	B	C	D	E
29. He asks that group members follow standard rules and regulations.	A	B	C	D	E
30. He fails to take necessary action.	A	B	C	D	E
31. He makes group members feel at ease when talking with them.	A	B	C	D	E
32. He lets group members know what is expected of them.	A	B	C	D	E
33. He speaks as the representative of the group.	A	B	C	D	E
34. He puts suggestions made by the group into operation.	A	B	C	D	E
35. He sees to it that group members are working up to capacity.	A	B	C	D	E
36. He lets other people take away his leadership in the group.	A	B	C	D	E
37. He gets his superiors to act for the welfare of the group members.	A	B	C	D	E
38. He gets group approval in important matters before going ahead.	A	B	C	D	E
39. He sees to it that the work of group members is coordinated.	A	B	C	D	E
40. He keeps the group working together as a team.	A	B	C	D	E

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